







WiseTraditions

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THE WESTON A. PRICE \bigcirc FOUNDATION[®] \bigcirc \bigcirc

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 nutrientdense 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.

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President's Message

The virus debate—which we have covered extensively in the *Wise Traditions* journal—is raging, showing up on blogs and websites throughout cyberspace. Those who are amazed at our stance that pathogenic viruses don't exist often ask: "If it's not a virus that is making me sick, what could possibly be making me sick?"

We like the answer posted by Alec Zeck (TheWayFwrd.com): "I don't know, maybe poor nutrition, herbicides, pesticides, stress, mold, perpetual fear, overuse of pharmaceuticals, poor sleep, poor gut health, heavy metals, toxic skin products, EMF exposure, dental procedures, toxic air fresheners, toxic cleaning products, lack of community, overuse of antibiotics, overconsumption of sugar, pasteurized inorganic dairy, fast food, processed food, refined grains, lack of time in nature, lack of exercise, poor detox pathways, unhealed trauma, vegetable oils, toxic tap water, lack of minerals, soda, overconsumption of alcohol, smoking, poor oral hygiene, chemtrails, shots, and so many other things."

As Alec says, "The reality is because we're so myopically focused on this unproven idea of some microscopic particles that are passed from person to person, we are ignoring the many other things that we know are making us sick!"

We will not be ignoring the many things that make us sick at the upcoming Wise Traditions 2022 conference. We'll feature some famous "virus deniers" such as Tom Cowan, Andrew Kaufman and Curtis Cost, and holistic health celebrities such as Kelly Brogan on holistic psychotherapy and Natasha Campbell-McBride on the GAPS diet. We'll explore some of the many toxins making us sick, including mercury in dental amalgams, inorganic iron and electromagnetic radiation, and a list of poisons in vaccinations. We'll provide you with accurate information on nutrition and practical how-to presentations. You'll have an opportunity to ask questions at our popular practitioners panel. And we will cap off the event with a keynote address by Catherine Austin Fitts, who ties our conventional disease model with the world's financial systems.

Plus, we have never worked with a better chef so we can expect delicious Wise Traditions meals! Lots of folks tell us they attend the conference for the food alone!

We're offering the many services you have come to expect, including child care (even during the banquet), scholarships, a full exhibit hall, and a free Friday evening film.

Space is filling up fast, and we may have to close registration early and at the door. So if you are planning to attend, don't delay in signing up at wisetraditions.org. See you there!



Your article, "The Devil in the Garlic: The Paradoxical Roles of Sulfur in Human Physiology" (Summer 2022) missed the forest for the trees. The sulfur dysregulation symptoms and diet they describe have a high level of overlap with low-level mercury toxicity and the benefits of a low-thiol diet, which is a subset of a low-sulfur diet.

The biochemistry of sulfur in humans is interesting, but the authors give only vague theories why some people and not others can't metabolize it well, and why those people benefit from reducing their intake of sulfur-rich foods. Low-level mercury poisoning is epidemic-exposure sources include amalgam dental fillings, vaccines and many others-which can be passed from mother to a developing fetus and can cause most of the chronic illnesses listed in the article. Wise Traditions covered this subject well in the Spring 2018 edition and in a recent low-thiol cookbook review.

Those with mercury toxicity often benefit from a low-thiol diet, which cuts out foods high in free or unbound thiol, a kind of sulfur group that reliably redistributes mercury around the body, causing symptoms to abate very briefly, as an amount of mercury is pulled out of tissues and organs into the bloodstream, and then become much worse over a few days, as it's redeposited elsewhere.

Foods that are high in sulfur and also in thiols include dairy, eggs, legumes, garlic and onions, the cabbage family, dark leafy greens, chocolate and coffee. Foods that are high in sulfur but low in thiol include meat and seafood, almonds, walnuts, Brazil nuts, sunflower seeds, pumpkin seeds, dried fruit, oats, wheat and ground ginger.

According to Wikipedia, "A thiol ... or thiol derivative is any organosulfur compound of the form R–SH, where R represents an alkyl or other organic substituent." Some forms of dietary sulfur are specifically thiol compounds, and foods that we refer to as "highthiol" have a relatively high level of unbound thiol compounds, whereas other foods could have a high level of sulfur, but in other kinds of compounds, such as meat, which wouldn't trigger the same mercury redistribution in those who are sensitive.

A low-thiol diet often helps people feel better, but the true fix—and that which enables sufferers to eat these foods again without restriction—is gentle, low-dose mercury chelation described by Dr. Andrew Cutler in his books *Amalgam Illness* and *The Mercury Detoxification Manual*, which are apparently already endorsed by the WAPF.

I noticed that though not all highsulfur foods are high-thiol, the authors only highlighted foods that are known to be high-thiol for an exclusion-diet trial. What about the low-thiol highsulfur foods? Why wouldn't those be problematic?

Name Withheld

Reply from Dr. Greg Nigh: I appreciate the feedback and the observations related to sulfur, thiols and mercury. A few comments around those topics:

First, I certainly make no claim that sulfur-metabolism issues are the only explanation for the symptoms I've seen resolved with the low-sulfur protocol we're implementing in the clinic. I am confident that mercury toxicity plays a complicating role for many people. Anyone doing regular heavy metal testing knows that virtually everyone tested has some level of excess mercury.





In a large percentage of patients who implement the full low-sulfur dietary program that Maria has developed, along with the supporting nutrients and the home therapies I am suggesting for them, they report back that they feel quite significantly better, and often in a very short time. Again, not everyone, but a significant majority. And these are typically not short-term improvements but the most sustained improvement some have experienced in decades.

We are able to get most to a place where they can reintroduce most highsulfur foods back into their diet without provoking a return of symptoms. Not uncommonly, though, there will be one or maybe a few of the high-sulfur foods they just can't seem to tolerate. Which sulfur foods this will be is unpredictable, and I don't think it fits the thiol model of reactivity. Nor do I think the symptom picture we see resolved has consistent overlap with symptoms associated with mercury toxicity.

If mercury toxicity were the explanation for the myriad symptoms we see associated with sulfur dysregulation, I am at a loss how to explain the very rapid and sustained resolution of most or all symptoms many of our patients experience with this protocol. I fully acknowledge the enormous biological damage that mercury toxicity causes and fully support the clinical approach of clearing it and other heavy metals from the body. But my clinical observations don't fully jibe with the idea that what I'm calling a sulfur-dysregulation issue is actually a hidden mercury toxicity issue.

Greg Nigh, author of The Devil in the Garlic, *will be a speaker at Wise Traditions 2022.*

SUCCESS WITH THE LOW-SULFUR DIET

Once again, WAPF has saved my life! All those years I thought I was reacting to fiber, or eating too much fat ... it was the sulfur! Within two days of the low-sulfur protocol, my gut (and really my entire torso) deflated. I can finally eat a large meal (and even things like bell peppers and tomatoes that I thought I couldn't) without discomfort and bloating. I finally don't look like I'm carrying a basketball in my belly at night.

My skin's transformation has been dramatic. I had skin so dry and scaly that dry-scrubbing resulted in my being enveloped in a cloud of skin particles that looked like snow. I haven't had a scale to speak of since starting a month ago, and my skin is smooth as silk. Could it all be from the Epsom salt baths? I would think if Epsom salt turned your skin baby-soft, everyone in the world would be using it.

And now I know why I had elevated blood glucose readings despite my low-carb and low-sugar diet! (This is explained in the book.) And why I have had tingling feelings just under my skin (for which a homeopath had suggested homeopathic sulfur for me years ago!) And why I had a rash across my upper abdomen almost nightly for the past fifteen years. It is now gone, unless I have something with a lot of sulfur in it, in which case the rash promptly reappears. Interestingly, as this diet calls for eating many more carbs than I was used to, I have not had any weight gain, nor fungal issues from the fruit sugar as in the past.

I have now been able to add several sulfur foods back in with only minor issues. Currently I'm working on breaking up biofilm with lumbrokinase and serrapeptase (especially important for people with a history of candida overgrowth.) If anyone has any questions, and wants to email me privately, I'm at ravensphere@gmail.com.

By the way, some have mentioned getting cramps from Epsom salt baths. I experienced some too. Don't know why. Nevertheless, I'm grateful, grateful, grateful!

> Michelle Eshbaugh-Soha Chapter Leader Denton, Texas

TOXIC 5G

I would like to report adverse effects from the "turning on" of 5G. Since the beginning of 2022, my husband has been battling a health decline.

My husband was thirty years old at the new year and is now thirty-one. We think your email announcement



about the "5G turn on" and his sudden health issues are not coincidental. As Pope Saint John Paul II said, "In the designs of Providence, there are no mere coincidences." In these past seven months, my husband has experienced unending fatigue and not many hours slept at night; weight gain and difficulty losing weight; difficulty breathing night and day; and headaches.

We live in the suburbs of Phoenix. Arizona, and although we are not in an area that has small cell 5G transmitters, we are certainly immersed in EMF smog and the electric grid. When we leave the Phoenix area and go to a more rural or native desert region of the state, he immediately feels better and his symptoms disappear. This happens in areas that are sparsely populated and that do not have many power lines.

We were on the Full GAPS Diet from September 2021 to April 2022. So, the new year of 2022 was smack in the middle of our diet. It was so strange for him to be feeling okay on the diet and then all of a sudden, he felt worse than before we started the diet. This fact also leads me to believe it is because of the introduction of 5G.

In the past couple of months, he has probably become adapted to this 5G technology attacking his immune system and health. He is breathing easier and sleeping better. The fatigue is still a concern but really, life has to continue so he is pushing himself through it.

As for me, I went through the fatigue just as he did, but I bounced back faster. Being hit hard but then bouncing back is something Dr. Louisa Williams spoke of on Wise Traditions podcast episode #373. Nevertheless,

leave the Phoenix Valley and move to a small town with lots of native desert, Wickenburg, Arizona. We close on



a piece of land with some acreage in early September, on the Nativity of the Blessed Virgin Mary. We look forward to living a natural and clean lifestyle. Thank you to WAPF for helping lead us to this change.

This 5G and small cell technology are truly evil. How dare these few individuals who are allowed to make such large and lasting impacts on the common folk like us! We will keep fighting against 5G technology and for health freedom.

> Casey S. Phoenix, Arizona

FARM SCHOOL MEALS

I thought you'd enjoy seeing our snack at farm school. We do all WAPF meals, two per day-one snack and one lunch for forty-five young farmers and three to ten counselors and crew. Ferments, raw dairy, veggies and sourdough are the mainstay. Then one stew, meatballs with liver, or beef and tacos for lunch. For dessert, banana bread topped with whipped cream and berries picked by our young farmers, or cobbler, or flan.

The kids eat everything we put out, especially the pickles! They consumed over five gallons the first week. They spontaneously chant, "Butter is better."

Bravery is our motto, observation our focus. This farm school's intent is to teach the kids to do scary things like cutting down small trees and go into the bee hives. Everything just makes the kids hungry!

Leigh Merinoff Chapter Leader West River/W. Townsend, Vermont

FROM A VACCINATED AUSTRALIAN

If Covid were a battlefield, it would still be warm with the bodies of the unvaccinated. Thankfully, the mandates are letting up and both sides of the war stumble back to the new normal.

The unvaccinated are the heroes of the last two years as they allowed us all to have a control group in the great experiment and highlight the shortcoming of the Covid vaccines. The unvaccinated carry many battle scars and injuries with the efforts to mentally break them, yet no one wants to talk about what happened to them and what they forced "The Science" to unveil. We knew that the waning immunity of the fully vaccinated had the same risk

profile as others within society as the minority of the unvaccinated, yet we marked them for special persecution. You see we said they had not "done the right thing for the greater good" by handing their bodies and medical autonomy over to the State.

Many of the so-called health experts and political leaders in Australia admitted the goal was to make life almost unlivable for the unvaccinated, which was multiplied many times by the collective mob, with the fight taken into workplaces, friendships and family gatherings. Today the hard truth is that none of it was justified as we took a quick slide from righteousness to absolute cruelty. We might lay the blame on our leaders and health experts for the push, but each individual within society must be held accountable for stepping into the well-laid trap.

We did this despite knowing full well that principled opposition is priceless when it comes to what goes inside our bodies, and we let ourselves be tricked into believing that going into another ineffective lockdown would be the fault of the unvaccinated and not the fault of the toxic policy of ineffective vaccines. We took pleasure in scapegoating the unvaccinated because after months of engineered lockdowns by political leaders blinded by power, having someone to blame and to burn at the stake felt good.

We believed we had logic, love and truth on our side so it was easy to wish death upon the unvaccinated. Those of us who ridiculed and mocked the non-compliant did it because we were embarrassed by their courage and principles and didn't think the unvaccinated would make it through unbroken, and we turned the holdouts into punching bags. Lambie, Carr, Chant, Andrews, McGowan, Gunner and the other cast of hundreds in prominent roles need to be held to account for vilifying the unvaccinated in public and fueling angry social media mobs. The mobs, the mask Nazis, and the vaccine disciples have been embarrassed by "betting against" the unvaccinated because mandates only had the power we gave them.

It was not compliance that ended domination by big pharma companies, Bill Gates and his many organizations, and the World Economic Forum. . . It was thanks to the people we tried



to embarrass, ridicule, mock and tear down. We should all try to find some inner gratitude for the unvaccinated as we took the bait by hating them because their perseverance and courage bought us the time to see we were wrong.

So if mandates ever return for Covid or any other disease or virus, hopefully, more of us will be awake and see the rising authoritarianism that has no concern for our well-being and is more about power and control. The War on the Unvaccinated was lost and we should all be very thankful for that. Author Unknown

GMO MILK

Most of the milk out there, which many of us drink for the calcium, may well be partly GMO. There was experimentally proven a horizontal genetic drift, where genes from GMOs consumed in the diet can pass to the gut bacteria, which then can pass those genes to the organism they inhabit.

Some may say, "Why now this GMO, why do we need to think about it? It doesn't affect us much!" Not for now, maybe. But your children, and the children of your children, will have greater chances of being born genetic cripples. Studies have shown cancer development in mice, in addition to many birth defects, who were fed only GMO crops. That happened to most of the mice, not to one or two of them. It didn't happen at once, but it did happen in the end. Do you know how many children are born now with birth defects, compared with twenty years ago? I don't want to spread fear, but I want to spread awareness.

Most milk and dairy products sold

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in supermarkets and on the Internet are probably already partly GMO. This is because the stock at most big farms is fed corn and soy. Most of the corn and soy, commercially available as cheap stock food, is GMO. Thus, most of the milk, cheese and dairy products, such as the skim milk powder, kefir, yogurt, cream, ice cream and whey protein that you can find, is probably part GMO.

Fortunately, there is a way to make sure the milk you buy is actually from pasture-fed cows, or at least cows fed only a minimal amount of corn and soy. It relies on brix numbers. I have tested some milk brands in Spain, and most milk in the supermarket has a brix of nine to ten—whether raw milk or UHT, it has the same brix reading. However, milk from pasture-fed cows gives readings of thirteen to fourteen. One milk brand gave a reading of sixteen!

How does this prove that those cows who give milk with a brix reading of sixteen ate no, or almost no GMO crops? Well, a GMO crop usually has a very low brix, meaning it is low in minerals. So, a cow eating lots of GMO crops would also have a milk with a low brix reading. However, it is possible that someone who feeds stock non-GMO crops may also have a reading of nine to ten because they use low-mineralized crops. But most farms buy some or all GMO crops and seldom grow their own low-mineral non-GMO crops. It is also possible that milk labeled from pasture-fed cows may have a reading of only ten to twelve, perhaps because the cows are on pasture only a few hours per day and the rest of the day are given GMO grains.

GMO feeding can affect the meat

as well. This would mean that most commercially available poultry, eggs, meat and fish (especially salmon) also should be avoided, if you don't want GMOs in your body.

Maybe some food labeled organic may be free of GMOs. But who checks those cows or chickens to make sure they were fed 100 percent organic, non-GMO feed? And that there were no GMO fields growing near them? Because GMO crops can pass GMO genetic material to non-GMO crops growing nearby. This is a proven fact.

How do we solve this dilemma? You can buy your meat, eggs and dairy products from a trusted source. Buy from farmers you know and trust, who don't use GMO crops, nor buy any GMO crops for their livestock. If you want, you can move to live on your own land. Grow your own high-brix, high-quality food! That's one of the best choices out there!

> Valerii Arvat Chisinau, Moldova

ROOT CANALS ALMOST DESTROYED MY BODY

Since my teens I have been extremely capable physically in sports, physical work and martial arts. My aim in life was to be both martial artist and Chinese medicine doctor. But martial arts was definitely my first goal.

I had my first root canal aged around seventeen. A few years later I remember complaining about a constant pressure behind my ear. Also strangely, aged around twenty-five, I suddenly couldn't go full power anymore at the gym, I put it down to stress from university studies. Also, my sexual appetite fluctuated, which I attributed to a difficult relationship.

In my late twenties I had a bad dental experience in a Third World country, and after that I refused to see any dentist for years, which resulted in four more root canals when I finally did visit a dentist again. I immediately started getting very sick, first of all inflammation in the ankle and upper spine, then muscle atrophy and lethargy plus many strange inflammatory symptoms. Also, that pressure behind my ears was driving me crazy. During that time, I aged ten years in less than two years-skin, muscles, strength. Suddenly I couldn't even handle the heat as my body was always on fire.

I had to return to Europe in the end due to these problems, and with the better diet and cooler temperatures I fared better. But the problems kept coming up, for instance, boils all over the body, and nobody knew why. Last winter it became serious, starting with what felt like gallbladder pain. After a few weeks and months this pain progressed to chest pain and racing pulse. Eventually I had to be admitted to hospital for two days, where I was diagnosed with pericarditis. Following this I was in bed for two months with extreme pain, hardly able to breathe-until one day one of the three remaining root canals developed an infection. I got antibiotics from the pharmacy and the next morning my symptoms were 95 percent improved.

After taking anti-inflammatories until my stomach was raw and the max dosage of painkillers for weeks, it was always the tooth, and a dose of antibiotics cured it. One week later I had it removed. The following months

I felt the energy of a twenty-year-old and managed to do full workouts in the gym again for the first time in nearly a decade.

Now there are two remaining root canals, the extreme surge of energy has balanced out, but the pericarditis nearly came back last month. I immediately had a few rounds of intravenous vitamins, amino acids and glutathione which healed even the last bit of strange feelings from pericarditis and have me feeling the best I have all year.

I always knew root canals could play a big role in my autoimmune disease, but it never really dawned on me that they could be the only cause, and that I'm a healthy person being continuously poisoned by dead teeth in my

mouth. In fact, there was a turn in psychology—from thinking of myself as a sick person, to realizing I have an incredibly strong body that took this level of poisoning for nearly twenty years and is still walking. To get to the ultimate bottom of this I went to probably the best dental clinic in the world for this kind of problem, the Biohealth Centre in Switzerland. There I had a full diagnosis and a complete treatment will cost about fifty thousand euros!

> Miro Westmaas Monaghan, Ireland

TRIP TO THE CZECH REPUBLIC

Recently I traveled to the Czech Republic for family business. I am pleased to report hardly anyone wore a mask; if we saw someone with a mask it was probably a tourist. We were around tons of people—in buses, trains, trams, underground, stores, on the streets and somehow we were fine! We even had to go to the hospital three times to check on a relative, and nobody asked us anything, thank God. At the same time, I know that the Czechs have been more of the rule followers during the lockdown. Getting to more alternative information and truth is much harder over there. You have to seek it yourself or be educated already.

We enjoyed the food while there. The big supermarket called Globus had a section with artisan meats plus a huge selection of cheeses. Meat stores sell lots of products with organ meats and gelatin. You can also buy traditional fats such as lard and goose fat. My girls



found it fun to find pig's feet and even a pig's head at a store. But they also sell lots of processed foods, and I noticed that people have gotten fatter in my home country. I think it's due to preservatives, fast food, sodas and a more sedentary lifestyle. And unfortunately, the food prices have been skyrocketing there. People have been experiencing side effects from the jab, but nobody really questions anything. Only one gentleman shared with us that his two good friends died shortly after the injection and his mom (age eighty-six) developed full-blown Alzheimer's the day of the injection. She was capable of fully living on her own and now she's very dependent on him. It is very sad and he said he wasn't alone in his observations, and people have been talking.

> Anna Simpson Chapter Leader Tolland County, Connecticut

INTRIGUED BY CLAY

I recently listened to episode 372 of your podcast with Victor Cozzetto

> entitled "Clay: Ancient Earth Medicine." [See page 54 for podcast transcsript.] I was *so* intrigued that when I got home, I mixed half a teaspoon of some French green clay (I had some on hand for face masks) in a quart of water. I stirred it with a wooden spoon and left it overnight. The next day, I was debating how much to drink, so I put the glass to my lips. When the clay-water hit my mouth, my whole body seemed to sense the heaviness of the clay water and I thought,

"Whoa, I had better go slow with this stuff!" So, I just took a small sip that morning. Later that evening just before bed, I had another sip and drank a full glass of water.

The next day I woke up and my husband asked if I had eaten anything the day before or what on earth had I done, because all my gut inflammation

was completely gone and it looked like I had lost weight! So, I did the same protocol: one sip in the morning followed by a full glass of water, and the same at night before bed. I noticed the second day that my body was beginning to show signs of detoxing! Frequent trips to the bathroom and acne on odd places like my ears and cheeks! This kind of information excites me as I know that it means the clay is providing something my body needs to continue on its healing journey and push toxins out.

I am going to continue the clay protocol and am excited to see what happens. I looked up episode 215 on kefir, which was also with Cozzetto, and have dusted off my kefir grains to see how the two work together. Thanks for providing such fun, easy, practical ways to support my body.

> Rachel Hester WhoopsyDaisy Farm Waynesburg, Kentucky

THRIVING ON RAW MILK

My chubby, very cute, happy, basketball-loving nineteen-month-old grandson is thriving on raw milk. He does not want to eat. He was born at home, nursed, and did not develop chewing capabilities until after a year old. He would sometimes gnaw on homemade arrowroot crackers. He would not touch egg yolks. But now he doesn't want anything except raw milk. As a young infant he was not a good sleeper nor was he an easy baby even though he was nursed and all the "right" things were happening. . . but his sleeping has improved recently. His forty-two-year-old mom tries to follow WAPF principles. One day soon, no

doubt, he will find his appetite and will chow down food like his five siblings. I just find it fascinating that when you give children the right thing, they thrive even when it seems minimal to us.

I also know of a seventeen-year-old girl who was diagnosed with cancer. After a million and a half dollars in medical treatments and two strokes in a very short time, she was dying before her mother's eyes. She is now on raw milk, and she is gaining weight and regaining some strength. Since she is refusing more allopathy, CPS is after her parents, but she won't go back. She does eat other food, of course, and is using a few other therapies, but raw milk provides her with digestible nutrition while her body works to heal and overcome the powerful insults of modern treatments.

Another story is about a client whose son, age two and one-half, was diagnosed with neuroblastoma. At the time the mother opted for the whole medical route for her child, which included very frequent trips to New York for years where specialists did clinical trials on him and other children. Finally, after there was nothing more to do, and many of the other children had died, the mother realized her son would also die. In her desperation she fearfully tried my suggestions, which included raw milk and raw liver in his G tube. I did not know whether he would live. Today he is a thriving fifteen-year-old, medically diagnosed cancer-free for over seven years. He does have some residual issues with one kidney, but he is going to school, playing ball and catching up from years of trauma. He has had no medicine for two years. Praise God!

I love to recommend raw milk especially in situations where digestive issues are serious. In these cases getting adequate nutrition is paramount, but difficult. Raw milk—since the greens are already "processed" through the four stomachs of the cow—assimilates so easily and gives tremendous benefits! I grew up on it, gave it to my five children and still drink it daily.

> Connie Newcome Chapter Leader McPherson/Hutchinson, Kansas

HERDSHARE OPPORTUNITY

We want to send our sincerest thanks for the opportunity your website and work for food freedom has given to our family. We began our raw milk herdshare on our farm about four years ago when we were only milking one cow. At the time, we had interest from several neighbors and friends.

We then increased our herd to three cows last year and decided to list our farm on the Real Milk Finder at realmilk.com. Since listing our farm only a few months ago, our membership has grown exponentially. We have now grown to six beautiful dairy cows to meet the demand. We attribute most of the growth to the listing on your website and can't thank you enough for this service that you provide.

Michelle Barringer Shelter Mountain Farm Mount Gilead, North Carolina

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

Caustic Commentary

Sally Fallon Morell takes on the Diet Dictocrats

FALSE PREMISE

One in six American adults takes an antidepressant, a 400 percent increase since the early 1990s. Most of these drugs, including Prozac, fall into the category of SSRIs-selective serotonin reuptake inhibitors-based on the theory that low levels of serotonin (a neurotransmitter in the brain) lead to depression. But researchers at University College London analyzed tens of thousands of patients suffering from depression and found "no convincing evidence" of a link with serotonin. The review, published in Molecular Psychiatry (July 2022), concluded that there is no difference in serotonin levels between healthy and depressed people. According to Professor Joanna Moncrieff, a consultant psychiatrist who led the study, "After a vast amount of research over several decades, there is no convincing evidence depression is caused by serotonin abnormalities, particularly by lower levels or reduced activity of serotonin." The study demolishes the rationale for prescribing Prozac and similar drugs, which have numerous side effects including nausea, headaches, anxiety, insomnia, drowsiness, sexual dysfunction, loss of appetite, rashes, increased blood pressure, seizures, increased risk of suicidal thinking and severe addiction. What a deal! SSRIs don't work, cause terrible side effects and are based on a false premise. Here's our prescription for depression: a good breakfast of bacon and eggs, lots of butter, cod liver oil, raw milk, adequate unrefined salt, grassfed meats and liver, plenty of sunshine and exercise in the out of doors.

DIRTY DOZEN

The Environmental Working Group has issued its new list of fruits and vegetables containing the highest levels of pesticides (www.ewg.org/foodnews/dirty-dozen.php). Strawberries top the list, followed by spinach and kale (major ingredients in popular smoothies), then nectarines, apples, grapes, peppers, cherries, peaches, pears, celery (watch out, you celery juice fans!) and tomatoes. Potatoes come in at number thirteen. According to the USDA, thirty-five different pesticides and herbicides have been found on conventional potatoes: six are known or probable carcinogens; twelve are suspected hormone disrupters; seven are neurotoxins; and six are developmental or reproductive toxins (livingmaxwell.com/health-risks-conventional-potatoes). Many of these chemicals are systemic, meaning they cannot be washed off. Parents, please protect your children! Buy organic and don't let them eat processed food!

BAD FOR BABIES

Dr. James Thorp, a maternal-fetal medicine expert, has analyzed data in the Vaccine Adverse Event Reporting System (VAERS) to compare outcomes of Covid-19 vaccines with influenza vaccines. "Covid-19 vaccines compared to the influenza vaccines are associated with increases in menstrual disorders, miscarriage, fetal chromosomal abnormalities, fetal cystic hygroma, fetal malformations, fetal cardiac arrest, fetal cardiac arrhythmias, fetal cardiac disorders, fetal vascular mal-perfusion abnormalities, abnormal fetal surveillance testing, abnormal fetal growth patterns, placental thrombosis and fetal death," Thorp reported to the Epoch Times (July 1,. 2022). Fetal malformations were fifty-fold greater for the Covid-19 vaccine and abnormal uterine bleeding was one thousand-fold greater. That's a lot of heartbreak and suffering for a vaccine that doesn't work and doesn't "stop the spread." While U.S. health authorities continue to urge pregnant and breastfeeding women to get the Covid jab, British officials insist that pregnant or breastfeeding women should not get vaccinated for coronavirus because "sufficient reassurance of safe use of the vaccine" for this demographic "cannot be provided at this time."

ANTENNAS AND COWS

Frédéric Salgues, a French dairy farmer in the department of Haute-Loire, recently won a court injunction to turn off a 4G antenna installed about two hundred meters from his farm. According to Salgues, about forty of his two hundred cows died mysteriously after the antenna was switched on; moreover, milk production dropped 15-20 percent. But the Salgues victory was short-lived. After a three-month stay, the telecom companies have turned the antenna on again. All this drama has occurred against a background of intense debate about mobile phone antennas in France, especially with the rollout of 5G replacing 4G-for example, two Catholic monks were arrested for setting fire to a 5G antenna near Lyon. According to the French health and safety agency (ANSES), the 5G antennas "do not present any notable risks to health because they use frequencies very close to the previous generations of connectivity" (uncensored.com, May 25, 2022).

Caustic Commentary

HIGH VOLTAGE AND COWS

In a similar case, a French court has awarded almost half a million euros to a dairy farmer in the Manche, France, after the local power company installed a high-tension power line near the farm, after which his cows suffered a loss in milk production. The farmer was compensated for a reduction in value of his farm (*Le Figaro*, June 3, 2022). The recognition that proximity to high-voltage power lines can affect milk

and in the meat cases at local supermarkets. But McDonald's soon discovered that Americans still prefer to eat all-beef patties, not laboratory-concocted substitutes. McDonald's has discontinued the McPlant burger; KFC, Taco Bell, Pizza Hut, Panda Express, Dunkin', Hardee's and A&W are also throwing out the fake meat. Beyond Meat's stock price peaked in July 2019 at over two hundred thirty-four dollars per share, and now trades at around thirty-two, a 74 percent

production in cows raises the question of what powerful magnetic fields do to milk production in human mothers.

VICTORY FOR EHS CHILD

Meanwhile, parents of an electromagnetic hypersensitive (EHS) child in the U.K. have won a five-year legal battle against two local authorities to have their child accommodated in school for EHS. The victory opens the door for other children. According to the girl's parents, "We are aware that currently other children with EHS in the UK are unable to access school and some of them are profoundly isolated given that



BEYOND BURGER BEEF BURGER

dependent analysis predicted that Beyond Meat would soon become a "zombie stock" hitting zero dollars per share. "You're not going to change cultural tastes overnight," said John Baumgartner, an analyst for the Japanese bank Mizuho, who still believes that people might accept lab meat if goaded with more propaganda. But in spite of all the propaganda that launched the product, Beyond Meat has failed to generate any positive cash flow since it introduced the Beyond burger in 2019. Realists are accepting the obvious: fake meat is McDone (natural-

fall in the last year. One in-

even homeschooling groups can be inaccessible to them due to prolific use of Wi-Fi and mobile phones in the community." Their daughter suffered headaches, insomnia and other symptoms when exposed to Wi-Fi or other kinds of EMF (phiremedical.org, August 2022). When enough children win the right to an EMF-free environment in school, authorities will have no choice but to hard-wire computers and forbid cell phones in the classroom.

MCDONE

The publicity campaign for artificial meat patties was extensive and intense; it included articles in the major newspapers, Internet advertisements and talk show hype. Beyond Meat burgers appeared on the McDonald's menu, in restaurants news.com, August 11, 2022)!

TREMORS AND CONVULSIONS

A 2022 Norwegian study published in *Pediatric Neurology* (131 (2022) 4-12) has found that of eighty-five cases of infants aged three to seven months diagnosed with vitamin B12 deficiency, 80 percent presented with apneas, motor seizures, absences, tremor or irritability within the first two months of life. Although none of the mothers was a vegetarian, 25 percent reported a previous history of vitamin B12 deficiency and 7 percent had celiac disease. The researchers proposed doses of nitrous oxide given during labor as a possible risk factor for infant vitamin B12 deficiency. Possibly related is a Florida University study that has linked exposure to

Caustic Commentary

glyphosate (the main ingredient in the weed killer Roundup) to convulsions in animals. Published in *Scientific Reports* (July 13, 2022), the results showed that glyphosate and Roundup increased seizure-like behavior in soil-dwelling roundworms. From worms to human babies may be a stretch but it should give us pause to consider all the neurotoxins to which our infants are exposed—both in the womb and after birth. Poisons like glyphosate not only have direct effects but also cause the body to use up vitamin B12, a combination that can result in neurologic abnormalities.

ADVERSE EFFECTS

Reports of adverse effects from the Covid-19 vaccinations continue to mount up. Informed Choice Australia has published a list of over one thousand studies on health problems following the shots. Cardiac disease (myocarditis and pericarditis) tops the list with three hundred thirty-six mentions in peer-reviewed journals, followed by vaccineinduced thrombotic thrombocytopenia, and arterial and venous thromboembolism. Other common reactions include anaphylaxis, neurological injury, Guillain-Barré syndrome, lymphadenopathy and skin reactions (informedchoiceaustralia.com, January 20, 2022). Other startling statistics include data from the British government showing that one out of every two hundred forty-six Covid-vaccinated people dies within sixty days (naturalnews.com, August 12, 2022); unpublished observations indicating that you are twenty-five times more likely to be injured and twenty times more likely to die if you get the Covid shot (stevekirsch@substack.com. August 10, 2022); and U.S. government data indicating a 143,233 percent increase in cancer cases due to Covid vaccination (truthll.com, August 16, 2022).

NOT FOR US!

Spain has one of the highest Covid vaccination rates in Europe. As of August 24, 2022, almost 86 percent of the population was "fully vaccinated" with the Covid jab. But not everyone. While tracking Islamic extremists, a Spanish undercover agent infiltrated Telegram channels and uncovered a scheme supplying fake vaccination certificates for up to two thousand euros. Eventually, authorities found over two thousand names, including actors, artists, athletes, entertainers and millionaires. One of the most prominent names on the list was that of José Maria Fernández SousaFaro, president of the pharmaceutical giant PharmaMar, who paid a "VIP fee" to obtain a certificate showing that he had taken a third dose, enabling him to evade governmental strictures on travel (europeanconservative.com, June 5, 2022). All of which leads to the question: how many world leaders who claim to have received the Covid vaccines are actually unvaccinated?

CHOLESTEROL AND CANCER

Statin pushers claim that treatment with cholesterol-lowering drugs helps prevent cancer, but in a recent commentary by Uffe Ravnskov and Kilmer McCully, published in Frontiers in Oncology (May 2022), the authors argue that statin treatment may cause cancer. They cite a paper published in Circulation Journal ((2002) 66(12):1087-95), which followed almost fifty thousand patients taking low-dose simvastatin. Six years later, the number of cancer deaths was more than three times higher among those whose total cholesterol was less than 160 mg/dl compared with those whose cholesterol was normal or high. Another study measured LDL-cholesterol levels of over two hundred patients requiring prostate biopsy. Those diagnosed with prostate cancer had LDL-cholesterol levels that were significantly lower than that of those without cancer. The situation is complicated by contradictory studies but why take a chance, especially since statin treatment causes a lot of other unpleasant side effects and doesn't even lower your risk of heart disease!

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.

Got Salt? Salt, Dopamine and Health

By John J. Gildea, PhD

hat is the most abundant electrolyte found in the human body? Sodium. But isn't a low-salt diet the best policy for most people? Let's investigate that premise.

In this article, I will share with you some principles about salt—and sodium consumption in particular—as it relates to health. Hopefully, these will dispel some sodium myths and convey insights that could change your life for the better.

Being aware of sodium needs and intentionally adding salt to the diet would be beneficial for the majority of people.

CHALLENGING SALT DOGMA

It's time to challenge the old models saying "sodium is harmful" and "everyone needs to reduce sodium consumption." In terms of sodium-dependent blood pressure sensitivity, an individual will fall on a rather wide salt spectrum. In other words, some people need more salt than others to be healthy. If you put a population of people on a low-sodium or high-sodium diet, the blood pressure responses of individuals in that population will fall on a continuous spectrum, which can be divided into three broad categories: salt-sensitive, saltresistant and inverse salt-sensitive.

For a *salt-sensitive* person (approximately 25 percent of the population), blood pressure goes up on the high-salt arm of the diet relative to the low-salt arm. Sadly, there is no currently available medical diagnostic test for salt sensitivity. In a *salt-resistant* individual, blood pressure stays constant on either arm of the diet, meaning salt has little effect on their blood pressure. Inverse salt sensitivity is a newly recognized category that includes 15 percent of the population; the blood pressure of an *inverse salt-sensitive* person *increases* on the low-salt arm of the diet relative to the high-salt arm.

Knowing where on the spectrum of salt sensitivity you land and acting accordingly may decrease your mortality. In a longitudinal study conducted over twenty years ago, individuals who tested as being salt-sensitive showed, on average, a 20 percent increase in cumulative mortality over the twenty-five-year period, with mortality roughly equal to individuals diagnosed with hypertension.¹

A recently published longitudinal study found that target organ damage and cardiovascular events in both salt-sensitive and inverse salt-sensitive individuals increased compared to salt-resistant individuals.² There are also quite a few papers published in the last few years, reporting on longitudinal studies on hundreds of thousands of participants, which show, using spot urine tests, that low urine sodium is associated with increased mortality. Some researchers have criticized these clinical studies for their use of spot urine sampling and the normalization method used, arguing that the gold standard is to use multiple twenty-four-hour urine samples to measure sodium. However, a study that did use multiple twenty-four-hour urines produced similar findings, showing increased cardiovascular and overall mortality in the low-sodium group.³

Being aware of sodium needs and intentionally adding salt to the diet would be beneficial for the majority of people. Undereating sodium stimulates a system that seems to be associated with the majority of ill effects. Thus, finding the right amount of sodium to eat for you as an individual is a really important decision. The only people who should restrict sodium in the diet are those who are salt-sensitive. Knowing whether you are salt-sensitive and how much sodium you should eat is critical—your life may depend on it.

ARTICLE SUMMARY

- Every person has a personalized salt index to maintain normal blood pressure and health, with blood pressure responses divided into three broad categories: salt-sensitive, salt-resistant and inverse salt-sensitive.
- Salt has little effect on blood pressure in salt-resistant individuals (the majority), but in salt-sensitive persons, blood pressure will rise with high salt intake, whereas in inverse salt-sensitive persons it increases with low salt intake.
- The salt-resistant have a lower incidence of cardiovascular events, stroke and organ damage, and lower mortality.
- A system in the kidney recovers a large percentage of salt and returns it into circulation instead of eliminating it.
- The renin angiotensin aldosterone system is a salt safety net, entering into play when the body needs to place more sodium back into circulation—but blood pressure medications can interfere with this.
- A second component of sodium regulation is dopamine receptors in the kidney, which get rid of sodium if you have eaten too much salt.
- Increased blood pressure is a third mechanism for getting rid of excess sodium—but at a cost.
- For multiple physiological reasons, taking a little salt before bed may be a good practice.
- The only people who should restrict sodium in the diet are those who are salt-sensitive.

UNDERSTANDING SODIUM HOMEOSTASIS

All animals are basically in balance with sodium consumption and sodium excretion and must maintain their inner ocean of sodium. Thus, the total amount of sodium that someone eats in a given day will be very closely matched with the amount that is eliminated through the skin, urine and feces. If you eat a little bit too much salt and you're in very good health, you'll get rid of that excess salt to return quickly to perfect balance. However, having studied sodium and human health for the last twenty years, I believe there are several important points that everyone should know to help them decide the right amount of salt to eat. Specifically, most people don't consider key factors about how the kidney deals with salt, which leads us to our second principle.

The second principle involves understanding the mechanisms of how the body absorbs, stores and excretes sodium. Your blood is very salty, and all of the blood that goes to your kidney is filtered and needs to be reabsorbed, including most of the salt. In fact, a rough estimate of the amount of salt you have to reabsorb back into circulation is 1.7 kilograms per day. Luckily, there is an entire system in the kidney that recovers a very large percentage of salt and returns it back into circulation instead of eliminating it from the body.⁴ Otherwise, we would all need to take in massive amounts of salt every day.

Note that this is a very expensive process in terms of total energy expenditure. Some estimates are that as many as 20 percent of all the calories you eat are used to supply the energy to drive this mechanism of filtering and reclaiming the salt of your kidney. Just one pump—known as the sodium-potassium pump—is so energyintensive that you can measure this activity as kidney oxygen consumption.

Looking at the recommended dietary allowance (RDA) of salt, we can gain a better understanding of the essential role and function of our sodium-potassium pump system as a key player in the mechanism of sodium absorption, storage and excretion. Although the RDA of salt is 5.8 grams (just over one teaspoon), the average daily intake of salt is 8.5 grams (over one and one-half teaspoons). This intake has not changed during a forty-six-year period despite constant messaging to adhere to the RDA and reduce the amount of sodium in the diet.5 Eating the RDA, you would reabsorb 99.7 percent of the filtered sodium in your kidney and only get rid of 0.3 percent of that sodium in urine. This shows you how slight increases or decreases in sodium excretion can have large effects on health because reabsorbing sodium takes a huge amount of energy, whereas getting rid of extra is easy-just turn off the spigot for a second and let some spill into your urine. Moreover, the RDA does not account for the degree of exercising, sweating and drinking plain water, which means an even higher percentage of sodium would require reabsorption in order to maintain a balanced system. Thus, the RDA of salt can be a vast underestimate of the amount of salt you need as an individual.

What happens if you do not consume enough salt for the amount you exercise and sweat out? Not surprisingly, your amazing body has prepared for this contingency by maintaining a sodium reserve. This auxiliary sodium is stored non-osmotically, meaning it does not also have water associated with the stored sodium. The largest repository of sodium is the skin, and the binding entity is referred to as the glycocalyx.

THE SALT SAFETY NET

If you consistently consume too little salt for your body's needs, you eventually will deplete your sodium reserves, mostly in the skin. This activates a counterregulatory system called the renin angiotensin aldosterone system (RAAS). This system enters into play when you need to recover more sodium back into your circulatory system and replenish the sodium storage system. RAAS is your salt safety net—but it comes at a cost.

Because salt is so important for homeostasis, RAAS activation is a good thing if you are eating too little salt. An excess of any individual component of the RAAS, though, can cause high blood pressure and is deleterious, so it is logical—though a little-known fact—that the The RDA of salt can be a vast underestimate of the amount of salt you need as an individual. majority of antihypertensive medications are designed to inhibit or block an overactive RAAS.

To understand the gravity of RAAS inhibition, allow me to dive deeper into RAAS mechanisms. Here is a quick overview of the villains in high blood pressure.

Renin (the "R" in RAAS) is necessary for converting a protein called angiotensinogen—made by the liver and, to a lesser extent, the kidney—into a peptide called angiotensin 1. Angiotensin 1 is converted to angiotensin II by an enzyme called Angiotensin Converting Enzyme 1 (ACE1). Angiotensin II is the peptide that causes the majority of sodium reabsorption. Angiotensin II binds to and activates a receptor called the angiotensin II type 1 receptor (AT1R).

The second "A" in RAAS is aldosterone, made by the adrenal cortex. Inhibitors of renin, ACE1, AT1R and aldosterone are important antihypertensive medications. Epinephrine is another hormone that is linked with RAAS and can increase blood pressure. Beta adrenergic receptor blockers-so-called "beta blockers"-are a class of antihypertensive medications meant to block the effects of epinephrine. Some individuals with resistant high blood pressure undergo a medical procedure called renal denervation treatment, which disrupts the nerve going to the kidney that produces epinephrine. However, this modality of reducing hypertension also reduces the production and signaling of angiotensin II. Thus, blood pressure medications and interventions, by interfering with RAAS and epinephrine, interfere with the vital modes of reabsorbing sodium back into circulation. It is curious that the main strategies for lowering blood pressure involve medication that blocks counterregulatory mechanisms used to reabsorb sodium back into circulation, but reducing sodium intake stimulates these mechanisms.⁶

THE ROLE OF DOPAMINE

There is another crucial component of sodium regulation not yet discussed—the dopaminergic system in the kidney. This opposing system to RAAS is often disrupted as people age and has been found to have reduced function in those with hypertension and salt sensitivity.

Dopamine is crucial to kidney function, and proper function of the

SALT-SENSITIVE OR INVERSE SALT-SENSITIVE?

SIGNS THAT YOU ARE SALT-SENSITIVE

Blood pressure rises on a diet containing salty food Tendency to diabetes and metabolic syndrome

SITUATIONS SHOWING YOU NEED MORE SALT Dry skin, prone to wrinkles Chronic fatigue Brain fog Low sex drive Difficulty dealing with stress Tendency to overheat when exercising Following a high-protein, low-carb diet kidney's dopaminergic system is necessary to prevent salt sensitivity. When activated, multiple dopamine receptors systematically get rid of sodium if you have eaten too much salt. If you eat excess sodium and your blood pressure goes up, it likely means the dopaminergic system in the kidney is broken, and you are not able to get rid of excess sodium. When this system is broken, you have to find another way to rid yourself of excess sodium—again, to balance your sodium intake and sodium excretion. Local production of dopamine from circulating L-dopa by the kidney causes natriuresis, which decreases reabsorption and delivers the excess sodium into your urine.

Fundamental studies carried out in mice involve raising the amount of dopamine produced in one cell type in the kidney (called the proximal tubule) by blocking its degradation. With the increased local dopamine production, a number of mechanisms are activated that can protect against known insults that cause hypertension.7 Conversely, blocking the production of dopamine locally in the same cell type cuts a mouse's lifespan in half.8 Understanding low sodium and high sodium-and how the kidney is set up to reabsorb virtually all of the sodium that is filtered-you can see that activating dopamine locally allows you just to get rid of a little bit of that sodium into the urine to maintain sodium balance.

STRIKING A BALANCE

Is there a mechanism for getting rid of excess sodium when your dopaminergic system is broken or your RAAS is overactive? Yes—high blood pressure! A phenomenon called pressure natriuresis is activated when your dopaminergic system is broken; this substitute system steps in when your blood pressure goes up and uses hydrostatic pressure in the kidney to get rid of additional sodium.⁹ By this alternative method, your own increased blood pressure is the mechanism for getting rid of excess sodium but at the expense of the pressure damaging organs in the process.

It is important to realize that every person has a balance between the dopaminergic system and the angiotensin system,¹⁰ and each person has a personalized salt index to maintain normal blood pressure and health.¹¹ Some of you are lucky and are salt-resistant, so you don't see huge effects of salt on your system. The balance of sodium is maintained relatively consistently in your system, and your blood pressure stays perfectly normal whether you eat high or low amounts of salt. As you might have guessed from the studies cited earlier, salt-resistant individuals have a much lower incidence of cardiovascular events, stroke and organ damage as well as lower mortality. Conversely, if you are on the salt-sensitive or inverse salt-sensitive ends of the spectrum, you accrue more organ damage, cardiovascular events and mortality.

Maintaining a balance of sodium in your system is integral no matter where you land on the spectrum but is especially important to those sensitive at either end.

So, who are the people who really have to constrain the amount of sodium they eat? Those designated as salt-sensitive will have salt-sensitive hypertension and the associated substantial decrease in lifespan if they do not reduce sodium consumption. In those individuals, the systems we have discussed—RAAS and the dopaminergic system—will also help excrete the excess sodium that can lead to high blood pressure.

SALT AND CIVILIZATION

At this point, I'd like to try to connect sodium and the Weston A. Price Foundation. One of the first things I remember about reading Dr. Price's book *Nutrition and Physical Degenera*- *tion* is that landlocked civilizations often would make sure they had trade routes to the sea. There were undoubtedly a number of reasons for this, but the one relevant here is that there was a necessary nutrient—salt—that had to be collected and transported in order to have a civilization that thrived. Every civilization had salt.

The Weston A. Price Foundation has held true to the major principles on necessary nutrients elaborated by Dr. Price in the 1930s. Notably, mainstream science is now more in line with the foundation's once-contentious stances on saturated fat, cholesterol, sugar consumption and the "X factor" (vitamin K2). The solid evidence base of the Weston A. Price Foundation never changed, but science has simply caught up. The topic of salt may be the next scientific dogma that gives way to traditional wisdom.

How does this relate to the way native cultures ate and the amount of salt they consumed? As was well-documented by Dr. Price, native cultures ate very little sugar and at the same time consumed higher amounts of fat and the associated fat-soluble vitamins contained within. The connection to salt is pretty striking. Studies show that if you restrict sugar and you restrict salt, you induce insulin resistance, the beginning stage of diabetes.¹² Similarly, the literature indicates that approximately 60 percent of individuals who are overweight and have hypertension and type 2 diabetes-also called metabolic syndrome-are salt-sensitive. They can't eat too much salt or their blood pressure will increase. Just from these two examples, you can see that getting the correct amount of The topic of salt may be the next scientific dogma that gives way to traditional wisdom.

CHLORIDE: THE OTHER HALF OF SALT

The other half of salt, chloride, is the second most abundant electrolyte and the most abundant anion (atoms with a negative charge). Like sodium, chloride is an essential mineral, meaning that without it, you will perish.

Does the universal tenet that one should reduce salt intake make sense in light of the role of chloride in human physiology? Most physiologists recognize chloride as essential for osmotic pressure in extracellular fluid and acid-base balance—by being the inverse of bicarbonate in the blood's buffering system—and as necessary for nerve cell conduction. Chloride is rarely a focus because of the kidney's ability to get rid of excess chloride in urine readily. However, measurably low chloride—called hypochloremia—has dire consequences. Deficiency of chloride is a controversial topic, but low chloride levels on hospital admission have been reported as an independent risk factor for mortality in heart failure, one that is even stronger than low sodium.²¹

Chloride is a necessary component for adequate production of stomach acid and is essential for digestion and absorption of nutrients, including other minerals and vitamin B₁₂. A lesser-known function of chloride—but a highly relevant one—is its role in innate immunity. It is necessary for the myeloperoxidase system, an important component of the immune system.²² Additionally, chloride is a necessary cofactor for enzymes, including ACE2; a decrease in function of ACE2 is associated with severity of Covid-19 infection.

salt is crucial.

The guiding principle here is that if you eat lots of sugar, eating a relatively lower amount of salt somewhat makes sense—even though it is not ideal—because the normal homeostatic systems are able to reabsorb more salt back into the circulatory system. If you are eating low sugar, however, you will tend to spill sodium into your urine, and your salt needs will increase.

SALT BEFORE BED

I met Sally Fallon Morell, founder and president of the Weston A. Price Foundation, at a meeting recently, and in her talk she suggested taking a pinch of salt at bedtime to aid falling asleep. I was intrigued when I put this suggestion in the context of what I know about sodium and the body.

There are a few physiological phenomena

that really make sense to me relating to the timing and sensing of sodium in the body. The first physiological phenomenon is called the gastrorenal reflex, a term coined by our research group.¹³ When you ingest salt, it goes into your stomach. In the base of your stomach, called the antrum, there are cells called G-cells that show sodium-induced increased dopamine locally and lead to the production of gastrin. Gastrin then leaves the stomach and goes to the kidney, where gastrin along with locally produced dopamine leads to natriuresis—or the elimination of sodium into the urine.¹⁴

I am struck by the timing of taking salt in the evening. A little-known fact is that a very popular and successful antihypertensive drug, generically called an angiotensin type 1 receptor blocker (ARB), only works when you take it in the evening before bed. Taking salt in the evening offers a similar mechanism: gastrin increases the local dopamine production and activates the dopamine D5 receptor in the kidney. This leads to the proteolytic degradation of the same angiotensin receptor, inactivating the same target as the medication.¹⁵ This may be considered a natural way to reduce AT1R function and its deleterious effects such as high blood pressure, stroke, cardiovascular disease, inflammation, fibrosis, reactive

TESTOSTERONE AND SALT

Testosterone is made by the Leydig cells of the gonads in males and in the ovaries in females, as well as a smaller amount in the adrenal glands. Both testosterone and estrogen are produced from the precursor cholesterol. Therefore, the first thing to know if you are taking a statin or trying to reduce your cholesterol is that you are reducing your sex hormones. In addition, both of these hormones slowly decline with age. Being happy, satisfied and stress-free—and eating a diet with low sugar, adequate salt and rich in micronutrients that include the fat-soluble vitamins—are the conditions we strive for; reaching this goal signals that it is the right time to reproduce. This state of being is inextricably linked with what we universally consider healthy.

Low sodium leads to increased renin angiotensinogen, ACE1, angiotensin II, aldosterone and epinephrine, all geared to increase sodium absorption. Angiotensin II in the testes reduces testosterone.²³ In genetic models of hypertension with rodents (such as the "spontaneously hypertensive rat" [SHR] or Dhal salt-sensitive rats), testosterone can raise blood pressure if the animals are eating a high-salt diet. The classic "high-fat" diet in normal rodents also leads to so-dium retention with blood volume expansion and high blood pressure; however, while these diets—high in vegetable oils, sugar and calories—are called "high-fat," they should more accurately be called the "standard American diet." Testosterone in these states can cause sodium retention.

There are also close associations of salt to stress and the stress hormone cortisol. High cortisol can cause sodium retention, and likewise insufficient cortisol can lead to hyponatremia and low testosterone. One of the effects here is via glucose—cortisol is a glucocorticoid, which raises blood glucose, which in turn stimulates sodium retention.

According to a 2022 meta-analysis published in *Nutrition and Health*,²⁴ low-carb, high-protein diets can reduce testosterone. "High-protein diets cause a large decrease in resting total testosterone" was the surprising conclusion. Many people follow this type of diet to lose belly fat or to increase muscle mass. Under these conditions, sodium would spill into the urine, and likely the drop in sodium would activate angiotensin II and reduce testosterone—although the paper does not propose low sodium as a mechanism. I believe the driving force here is low blood sugar, which reduces glucose-dependent sodium reabsorption and leads to the spilling of sodium into the urine. For any ketogenic diet, you really do need to eat excess salt. Low sodium explains the keto fog so often associated with these diets.

Being overweight can reduce testosterone because fat cells have aromatase that convert testosterone to estrogen. A consideration when you go on a very calorie-restricted diet and you quickly metabolize fat is that you are releasing toxins stored in your fat.²⁵

Since a low-salt diet is also likely to be low in chloride, a reduction in ACE2 would occur since chloride acts as a cofactor for enzymatic activity, and this would reduce the protective arm of RAAS. This would lead to the increased production of angiotensin II by the fact that low ACE2 would redirect the conversion of angiotensin I away from the production of angiotensin 1-9 and angiotensin 1-7 and down the path to angiotensin II. By contrast, stimulation of the ACE2 arm of the RAAS increases testosterone.²⁶

oxygen species and vasoconstriction.

Another effect of taking a pinch of salt at night, is that when you eat salt and produce gastrin, this gastrin goes to the sphincter at the top of your stomach and closes it.¹⁶ This would be protective against acid entering the esophagus. Because this part of your digestive system does not have a protective layer of mucus, this sphincter not closing could cause epigastric distress and conditions like gastroesophageal reflux disease (GERD). Salt effectively closes the sphincter.

Continuing with the idea of salt before bed, increasing sodium is known to reduce epinephrine production. Low sodium activates the production of epinephrine, a stimulating hormone, while salt turns off the production of epinephrine, allowing you to relax and go to sleep. The timing of this before bed seems appropriate. When you are sleeping, your heart rate and blood pressure decrease and allow repair, especially of the small capillaries throughout the body.

This maneuver before bed might be something to try for yourself, especially if you are following the dietary guidelines set forth by WAPF.

THE TEST OF TIME

Many tenets of health and nutrition that Weston Price discovered have brilliantly stood the test of time in spite of the suggestions coming from mainstream science that encourage high sugar and carbohydrate consumption while promoting lower cholesterol and saturated fat. Salt may be another area of the diet where Dr. Price had it right—generations before science figured it out.

In fact, I wrote a paper where I showed that if you remove cholesterol from the kidney, you get salt-sensitive hypertension.¹⁷ Recently, researchers found that cholesterol actually binds to the dopamine D1 receptor and allows it to function more efficiently.¹⁸ The implication is that lowering cholesterol by diet or drugs might make you more salt-sensitive.

Other habits to consider regarding salt and health are common practices that tend to push you toward the RAAS-stimulated side of the balanced system. One is drinking large amounts of water when you are not thirsty. An extreme version of this is known as water intoxication. Yet, any movement toward hyponatremia—low sodium in the blood—may be harmful. It would be better to increase salt and drink a normal amount of water—or add a pinch of salt to the water you drink!

Other behaviors that may put you at risk of hyponatremia are to exercise extensively for long periods of time or spend long periods of time in a sauna or be outside in excessive heat. The amount of salt loss during these activities can be detrimental, especially if you are actively trying to restrict sodium intake as dietary guidelines universally suggest. The videos of marathon runners at the end of a race stumbling and passing out are hard to forget. This is the consequence of drinking too much water without replacing salt at the same time. Interestingly, consuming both glucose-containing and electrolyte-containing drinks specifically during these extreme endurance events can combat this effect.

Hyponatremia has other deleterious effects and increases your chance of fatality from any accident, dramatically so if the accident leads to substantial blood loss. One paper studying the elderly shows that if you are hospitalized and have hyponatremia (versus just hospitalized), your chance of death increases by 273 percent within one year.¹⁹ It has also been shown recently that athletes practicing or competing for extended periods of time have a high incidence of hyponatremia.²⁰ If you take salt before exercise, performance is vastly improved, and it appears that at least a portion of this effect is due to core body temperature cooling. But that is a discussion for another day.

In conclusion, I hope you have a better understanding of the importance of sodium in human health and the natural mechanisms that help the body find an internal balance. There is indeed a great deal of wisdom in the especially pertinent Wise Tradition of reducing sugar and having adequate sodium consumption.

John J. Gildea, PhD, is a cell pathophysiologist and molecular geneticist with thirty-three

The videos of marathon runners at the end of a race stumbling and passing out are hard to forget. This is the consequence of drinking too much water without replacing salt at the same time.

years of bench experience in both industrial and academic labs, and the author over sixty peer-reviewed publications. At the University of Virginia, Charlottesville, since 2008, a guiding principle of his work has been to establish innovative optimized model systems to investigate both normal and pathological states. Dr. Gildea has made significant contributions in the study of dopaminergic and angiotensin system counterregulation in hypertension and salt sensitivity.

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The Health and Healing of Your Humble but Mighty Gallbladder

By Linda Zurich

our gallbladder—or bile bladder—is a small organ tucked beneath the liver behind your ribs on the right side of your abdomen. This humble but vital little organ, also known as the cholecyst—from the Greek *khole* or *chole-* for "gall" or "bile" and *kystis* (or the Modern Latin *cystis*) for "bladder," "sac" or "pouch"—is a holding tank for bile.

In this article, I will provide a general overview of the gallbladder, the bile and the biliary ductal system (or biliary tree), including the primary roles they play in the digestion of fats. I will also discuss some potential health issues that may arise regarding the gallbladder, bile and biliary tree, as well as offering some suggestions for natural, holistic approaches for supporting their healthy functioning.

GALLBLADDER OVERVIEW

The gallbladder serves four primary purposes. First, it is the storage vessel for bile, and second, it concentrates bile during storage. Third, it releases bile on demand into the small intestine to assist with the breakdown of dietary fats for digestion. Finally, it keeps bile and the metabolic wastes and toxins contained within bile sequestered, thereby preventing it from entering into circulation in the bloodstream or body systemically.

The gallbladder's relationship with the liver is in some ways analogous to the relationship between the urinary bladder and the kidneys. Both the gallbladder and the urinary bladder serve primarily as dedicated storage receptacles for fluids that have been filtered or generated by the liver and kidneys, respectively. The gallbladder and urinary bladder are specifically designed to contain these fluids, thus ensuring they remain out of general circulation.

The main difference between these two organ pairs, at least as is relevant to this discussion, is that the constituents within the urine held by the bladder are for direct evacuation. Therefore, once the bladder is full, this fluid is excreted directly out of the body via the urethra for immediate elimination.

Bile, however, contains components that are necessary for the digestion of dietary fats we consume. Therefore, bile is held continuously by the gallbladder and is excreted by the gallbladder into the duodenum as and when required for fat assimilation. The second primary function of bile is to carry away wastes and toxins that the liver has filtered from the blood and deposited in the bile; earmarked for disposal, these eventually bind with feces further along the digestive tract and are eliminated from the body via the stool.

WHAT IS BILE?

Bile (or "gall") is a sticky, greenish, brownish or yellowish fluid that is produced continuously by hepatocyte cells within the liver. The liver of an average adult produces approximately eight hundred to one thousand milliliters of bile per day—about one quart.



Source: File:Digestive system showing bile duct.png: Pueblo.gsa.gov derivative work: Pixelsquid, Public domain, via Wikimedia Commons

About 95 to 97 percent of bile is water, with the remaining 3 to 5 percent composed mainly of bile salts (aka bile acids), cholesterol, phospholipids, lecithin, electrolytes and pigments. The latter include bilirubin (yellow) and biliverdin (green), which is the oxidized form of bilirubin; combined, these give bile its distinct greenish-yellow color. Bilirubin and biliverdin—produced through the catabolic processes involved in the breakdown of hemoglobin in old or damaged red blood cells—are some of the metabolic wastes that the bile sequesters for subsequent elimination.

The bile salts are primarily what make bile a vital digestive fluid, used by the body to break down dietary triglycerides into individual fatty acids, assisting in their assimilation, absorption and digestion. Besides helping to break down consumed fats for digestion, bile salts are also natural laxatives that help soften stools and promote regular bowel movements.

The body considers bile salts so valuable perhaps even somewhat "expensive" for the liver to produce—that they are recycled back to the liver via absorption through the small intestine. Once absorbed there by enterocytes, they pass through the intestinal wall and are then returned through the hepatic portal vein back to the liver for reuse in bile.¹ This natural recycling process of bile salts is called "enterohepatic circulation."

Enterohepatic circulation is an especially important concept in the field of toxicology, as lipophilic (fat-soluble) xenobiotics sometimes also undergo this process of being reabsorbed along with bile salts and recycled back to the liver.² Examples of lipophilic xenobiotics include some pharmaceutical drugs and pesticides, polychlorinated biphenyls (PCBs) and contaminants generated by the incineration of industrial wastes.³ Due to the toxic nature of these chemical substances, their reabsorption back into the system may be a contributing factor to the development of diseases or other disorders of the liver, gallbladder, biliary tree and perhaps beyond.

CHOLECYSTOKININ

AND THE BILIARY TREE

After we eat a meal, the food we've consumed eventually passes from the stomach, in the form of chyme, into the uppermost part of the small intestine, the duodenum. If the meal we've eaten contained fat, the presence of fat when it enters the duodenum stimulates the mucosal epithelial duodenal cells to secrete a signaling peptide hormone called cholecystokinin (CCK). Cholecystokinin is the primary stimulus for the delivery of bile into the small intestine. Once CCK has been secreted, it in turn signals the gallbladder to contract, releasing a portion of its stored bile.

The biliary tree consists of a system of ducts or vessels through which secretions from the liver, pancreas and gallbladder—including bile—flow into the duodenum. The main anatomical parts of the biliary tree include intrahepatic bile ducts; right and left hepatic ducts; the common hepatic duct; cystic duct; common bile duct; ampule of Vater; sphincter of Oddi; and major duodenal papilla.⁴

Once created in the liver, bile collects into the intrahepatic bile ducts. These ducts direct the flow of bile into the right and left hepatic ducts, which then converge to form the common hepatic duct. The common hepatic duct connects to the cystic duct, which transfers bile to the gallbladder for storage.

Bile stored in the gallbladder remains confined there until it is delivered on demand into the small intestine to assist in the digestion of fat. This happens when the presence of fat is detected in the duodenum. As mentioned, the release of fat from the stomach into the duodenum triggers the gallbladder to contract and release some of its stored bile, which flows via the ducts in the lower portions of the biliary tree (the ampule of Vater, sphincter of Oddi and major duodenal papilla) directly into the duodenum.

UNDERSTANDING

FAT EMULSIFICATION AND DIGESTION

Luscious, rich and satisfying, deeply flavorsome and an essential source of vital nutrients (including the key fat-soluble vitamins A, D, E and K), traditional dietary fats and oils are arguably the cornerstone of a nourishing Wise Traditions diet.

All fats and oils have a unique and very distinctive viscous consistency that we associate with being "oily" or "greasy." Due to this particular texture, and because the fat molecules (called triglycerides) in the foods we eat are relatively large, fats need to be broken down into smaller particulates, whether to wash them away from our dirty dishes or to digest them inside our bodies.

Those of us who consume liberal amounts of foods rich in fats and oils, particularly fats that are saturated and therefore solid at room temperature, know from experience that after eating a meal that features generous amounts of fats, the fats tend to cling to our plates, utensils, cookware and surfaces. We also know that when we clean up after eating such a meal, we need to use lots of warm, soapy water if we're to be successful in our cleaning process. As the saying goes, "oil and water do not mix." Fats are simply not soluble in water; therefore, using nothing but water to clean fats from our dishes and surfaces is generally not very effective. Adding soap or detergent to our wash water solubilizes the fats, working to dissolve their macromolecules into much smaller molecular particles. This process, whereby soap emulsifies fat and turns it into tiny particulates, allows the particulates to become much more easily dispersed and dissolved into the wash water, leaving our dishware clean.

In this context, bile is one of the most important substances our body produces. Upon reaching the duodenum, bile works together with digestive enzymes secreted by the pancreas to assist in the further breakdown of dietary fats, employing a similar detergent action as occurs in the cleaning of fats in the kitchen, via the process of emulsification. This allows us to digest and assimilate fats and the fat-soluble nutrients carried within them properly. In other words, just as the fats on our plates, cookware, stovetops and countertops need to be broken down via the process of emulsification to be washed away effectively, so, too, must our bodies break down and emulsify the relatively large molecules that comprise the dietary fats we consume into smaller particles, so as to render them into a form that may be absorbed through our intestinal lining into the watery matrix of our lymphatic system and bloodstream. Only when broken down into their simpler fatty acid components can the fats we eat—and the all-important fat-soluble vitamins—be effectively absorbed



Source: OpenStax College, CC BY 3.0, via Wikimedia Commons

If, over the course of time, people purposely limit their intake of fat, they may quite possibly be stagnating the flow of bile from the gallbladder into the small intestine. by the tiny villi in the brush border that forms the intestinal lining of our digestive tract.

LOW-FAT DIETS AND GALLBLADDER PROBLEMS

The free flow and systematic movement of bile from the liver into and through the gallbladder and biliary tree and into the small intestine are vitally important and intrinsic to the good health and proper functioning of these organ systems. Conversely, when there is stagnation, reduction or stoppage of bile flow, this may contribute to several potential health issues. The medical term for this condition—where bile flow is slowed or impaired—is cholestasis.⁵

The underlying reasons why cholestasis and other afflictions involving the gallbladder and biliary tree arise are not well understood. However, because fat consumed in the diet is the only way the discharge of bile by the gallbladder into the digestive tract is triggered, it stands to reason that one's fat consumption—or rather a lack thereof—may well be a significant contributing factor to the onset of cholestasis. If, over the course of time, people purposely limit their intake of fat, they may quite possibly be stagnating the flow of bile from the gallbladder into the small intestine.

Cholestasis is often a precursor to more serious conditions involving the gallbladder and biliary ducts. Such conditions include *cholecystitis* (redness, swelling and/or inflammation of the gallbladder); *cholangitis* (inflammation of the biliary tree resulting from infection); *cholelithiasis* (gallstones); and *choledocholithiasis* (one or more gallstones in the common bile duct). These conditions can involve severe discomfort and pain, which is generally felt on the right side of the trunk or in the back, near or under the right shoulder blade.

THE DOWNSIDE OF GALLBLADDER SURGERY

When allopathic doctors diagnose someone with a gallbladder condition, they often recommend a cholecystectomy—the surgical removal of the gallbladder—a procedure first performed in the 1870s.⁶ Although most surgeons who routinely perform cholecystectomies will tell their patients that the gallbladder is a non-essential organ without which they can live perfectly well, the truth is that we were all born with a gallbladder for a reason. It is, in fact, a vital organ that serves important purposes.

What happens when someone's gallbladder is surgically removed? After a cholecystectomy, there is no storage, sequestration or concentration of the bile as occurs when the gallbladder is intact, and because the gallbladder has been removed, there is no discharge on demand of bile as and when it's needed when a meal containing fat passes from the stomach into the small intestine. Instead, the biliary tree is rerouted so that the bile, which is constantly produced by the liver twenty-four hours a day, flows directly into the duodenum, perpetually and steadily dripping into the small intestine, essentially at the rate it is produced.

Evidently, the majority of people who have had a cholecystectomy are fortunate enough to experience no noticeable symptoms after having their gallbladders removed, seemingly living up to physicians' assurances that they can get along quite well without this organ. However, as was already noted in the 1940s,⁶ a subset of people either experience no improvement post-surgery or develop new symptoms.⁷ Most often digestive in nature, these symptoms have been given the label of "post-cholecystectomy syndrome" (PCS).

Current estimates suggest that four in ten post-cholecystectomy patients experience symptoms of PCS,⁸ which can include pain or discomfort similar to that experienced prior to surgery. Other PCS symptoms include intolerance of or inability to digest fatty foods, nausea, vomiting, jaundice, diarrhea, indigestion and the passage of oily stools.

HOLISTIC APPROACHES TO GALLBLADDER HEALTH AND HEALING

The presence of overly thick, sludgy bile or of gallstones is indicative of aggregation or calcification of constituents within the bile, likely resulting from stagnation. The inflammation caused by stagnated or blocked bile flow can result in discomfort and pain in the areas of the gallbladder and biliary tree.

Fortunately, there are several options that may help naturally maintain healthy gallbladder

and biliary tree function, or promote healing in individuals experiencing health issues associated with these organs. Some of these may also be helpful for those who are experiencing health challenges after having gone through a cholecystectomy.

First, as much as possible, consume plant foods that are organically grown and choose animal foods from humanely raised, pasture-fed livestock not given feed sprayed with pesticides or other poisonous agricultural chemicals. Remember that the liver is likely to sequester some of these toxic compounds into the bile for elimination with the stool; eating as cleanly as possible can go a long way toward helping the entire biliary system work properly, especially with regard to the clear and free flow of bile as nature intends.

Second, avoid eating a low-fat diet. Instead, include in your diet generous amounts of nutrient-dense traditional fats and oils such as pastured butter, ghee, tallow, lard and poultry fats (goose, chicken and duck). In particular, avoid the consumption of genetically modified, chemically sprayed seed oils and margarine, including those derived from soy, corn, canola and cottonseed, which are unnatural, toxic and may impose a potentially damaging, noxious burden on the liver, bile, gallbladder and biliary tree.

Third, consider taking about one-quarter teaspoon of an herbal digestive bitters extract before meals,^{9,10} holding the extract under the tongue or against the gums for a minute or so to allow the active constituents of the herbs to penetrate into the oral tissues sublingually. The absorption of bitters in this way creates a

cascading signaling effect through the body systemically, encouraging the flow of stomach acid and other beneficial digestive supporting fluids through the wider digestive system in anticipation of the incoming meal.

Fourth, some may wish to take digestive enzymes with meals. The older we become, the fewer digestive enzymes our bodies are capable of making naturally. Taking supplemental digestive enzymes is a very safe and easy way to help improve digestive function in both young and old. It may be especially helpful for some individuals to supplement with the digestive enzyme lipase. Lipase is naturally produced by the mouth, stomach and pancreas, and works together with the bile specifically in the emulsification and digestion of dietary fats.

Fifth, taking supplemental ox bile is another potentially helpful option for those suffering with digestive challenges, particularly postcholecystectomy. Ox bile contains the very bile salts that are required for the proper breakdown of dietary fats prior to their digestion. Ox bile may also be helpful for those who still have their gallbladder intact but are dealing with symptoms of cholestasis, gallstones or other gallbladder/biliary tree issues.

Sixth, consider certain herbs (see sidebar below). *Choleretic* herbs specifically promote increased bile secretion by the liver and flow of bile from the liver, while *cholagogue* herbs specifically promote increased gallbladder contraction (ergo, increased secretion of bile), promoting the free flow of bile through the biliary tree into the small intestine. Some herbs are crossovers—considered to be both choleretics Include in your diet generous amounts of nutrientdense traditional fats and oils such as pastured butter, ghee, tallow, lard and poultry fats.

HERBS SUPPORTING THE GALLBLADDER AND THE LIVER

The following is a partial list of herbs—including choleretics (which promote increased bile secretion by the liver and flow from the liver), cholagogues (promoting increased bile secretion by the gallbladder) and others—that may support the healthy functioning of the liver, bile, gallbladder and biliary tree.

- Chanca piedra (Phyllanthus niruri), aka "stone breaker": Leaf, stem, and root
- Milk thistle (Silybum marianum): Seed
- Burdock (Arctium lappa): Root
- Yellow dock (Rumex crispus): Root
- Dandelion (*Taraxacum officinale*): Root
- Gentian (Gentiana lutea): Root
- Stone root (Collinsonia canadensis): Root
- Turmeric (*Curcuma longa*): Rhizome

Our livers—never designed to cope with the levels and types of poisons commonly found today in our air, water and soils—deserve proactive support. and cholagogues. Many of these herbs also support the liver. Our livers—never designed to cope with the levels and types of poisons commonly found today in our air, water and soils—deserve proactive support. The more liver support we provide, the better our liver will be able to deal with the unprecedented levels of toxic environmental burdens imposed by our modern world.

Seventh, the topical application of warm castor oil packs is another holistic approach that can support the health and healing of the gallbladder and liver. A castor oil pack applied externally, placed over the liver and gallbladder area on the upper right side of the abdomen, encourages improved lymphatic movement and drainage and promotes increased blood circulation to the area, while soothing discomfort and easing pain. Naturopath Louisa Williams does not advise the use of hot water bottles or heating pads and recommends using the packs no longer than twenty to forty minutes, as well as being sure to use fresh castor oil that has not developed rancidity.¹¹

Eighth, coffee retention enemas are another very effective practice supportive of the liver, bile and gallbladder. The late Nicholas Gonzalez, MD, past presenter at Weston A. Price Foundation conferences, heavily promoted coffee enemas, often prescribing them as an integral component of his holistic treatment plans for his patients—many of whom had been diagnosed with cancer.¹² According to Dr. Gonzalez and other proponents of coffee enemas,¹³ the palmitates or palmitic acids in the coffee used in the enema travel via the portal vein from the lower portion of the bowel to the liver, where their presence stimulates the release of bile into the biliary tree.

Finally, the bile, the liver and the gallbladder are all classically associated energetically—particularly by practitioners of traditional Chinese medicine—with emotions such as anger, bitterness and resentment. In light of this, it may be helpful for people who are dealing with health issues related to those aspects of physical anatomy and physiology to focus on finding healing and promoting the resolution of such energetic underpinnings, which may be influencing their ability to maintain optimal physical health.

A former co-leader of the Seattle, Washington, chapter of the Weston A. Price Foundation, Linda Zurich is a keen investigator and an ardent independent researcher. Her primary focus revolves around exploring the broad spectrum of holistic paths that lead to human, animal, plant, environmental and planetary health and healing. She also has a great passion for expanding her knowledge and understanding of the workings of the human body. A perpetual student, autodidact and aspiring holistic health polymath, Linda is especially inspired to share information that informs and encourages people to assume greater control of their health and that of their families through engaging and empowering their bodies' own innate and profound healing wisdom..

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Healing Life and Lungs After Covid

By Betsy Thomason, BA, RRT

ovid has left an indelible mark on life in the third decade of the twenty-first century. If you did not experience Covid symptoms yourself, you certainly know someone who did and you may even know someone who died.

Among those hospitalized with Covid are folks who are experiencing serious aftereffects that affect all organ systems—what has been labeled "long Covid." Dr. Ziyad Al-Aliy, director of the Clinical Epidemiology Center and research head at the Veterans Affairs St. Louis Health Care System, describes the breadth of organ system dysfunction in "long Covid" as "absolutely jarring."¹

PULMONARY FIBROSIS

Where the lungs are concerned, "idiopathic pulmonary fibrosis" is the term doctors use to describe the Covid-related lung condition involving abnormal thickening and scarring of connective tissue (fibrosis). The eventual loss of lung elasticity can cause persistent cough, chest pain, difficulty breathing and fatigue.² Whereas "idiopathic" means "of unknown origin," there are many well-known causes of pulmonary fibrosis, including long-term occupational encounters with inhaled asbestos fibers (for example, in twentieth-century shipbuilding and maintenance); exposure to dust from substances such as coal (mining), silica (highway repair), hay and bird and animal droppings (farming); and air pollution.

The development of fibrous connective tissue can be a normal bodily response designed to repair injury or damage, but under some circumstances, the process goes awry.² What is not known is why, in the case of pulmonary fibrosis, alveolar tissue healing veers in a pathological direction. Dr. Jaymin J. Kathiriya and colleagues offer an explanation in a study published in January 2022 in *Nature Cell Biology*.³ The lungs contain different kinds of epithelial (lining) cells, which all have specific functions. In the lung-healing process, this differentiation can become confused, resulting in cells proliferating where they do not belong and preventing normal function. More specifically, what these researchers report is that cells lining the bronchi (the air-passage tubes) replace the alveoli—the one-cell-thick tissue through which oxygen and carbon dioxide need to travel, into and out of the blood, respectively. Two different functions; two different structures. Thus, pulmonary fibrosis—which compromises the lungs' ability to defuse oxygen and carbon dioxide.

RETHINKING HEALING

The medical community has taught the public to expect quick fixes—with drugs, and now vaccines. In the case of long-haul Covid lung injuries, however, there is no quick fix. For a century, in fact, mainstream medicine has been unable to prevent or reverse the long-lasting effects of pulmonary fibrosis, nor did it have any solution to offer for the prevention or reversal of the fibrotic changes observed twenty years ago with Severe Acute Respiratory Syndrome (SARS). Physicians such as Dr. Al-Aliy are now arguing for the need "to take long Covid more seriously and devote resources to it" so as to discover new treatments.¹

When you are depressed and anxious about your health, it's hard to start rethinking the meaning of healing and learn new approaches to well-being. Itself a novel idea, "well-being" is a state of body, mind and spirit harmony that can foster the joy of inner peace. Even when your body is not as fully functional as your brain desires, you can employ positive energy to make the best of your situation.

I make no claims about curing Coviddamaged lungs—that is, returning them to their pre-Covid state. Rather, it is my thesis that the body has many untapped back-up and interconnected support systems—ready and waiting for recognition—which can help you eliminate inefficiencies and restore hope for a more functional future. This approach is powerful no matter what ails you because it grounds you in your body, rather than in your brain. As you begin to listen to your body's messages, you can take appropriate positive action.

Let's face it: healing can be arduous work whether physically, mentally, emotionally or spiritually. I believe that a healing strategy that involves appreciation for the body, efficient



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breathing, ample movement, appropriate hydration and excellent nutrition—applied with focus and commitment—can bear fruit.

APPRECIATE YOUR BODY

To establish a solid commitment to healing, start with an appreciation of your body. Love your body unconditionally, as you would a two-year-old. It is yours to nourish and nurture.

Recognize the fact that your body deserves total respect for its responsiveness—positive and negative—and its resilience. The brain, which sits on top of the body as though it is in total charge, would like to convince you otherwise, but actually, the body's true brain, called the enteric nervous system, is in the gut. So, when you have "a gut feeling," it is your sensible gut speaking—and you must listen.

The skirmish between brain and body intelligence often takes place in the neck. If you have trouble swallowing or speaking, or if your neck is stiff, that's your body screaming at you. Listen and figure out the message.

You will realize you love your body when you can stand naked in front of a mirror and acknowledge your admiration for your beautiful body. Have fun with it! Remember that while you are *not* actually your body, your body is the home of your soul and spirit and allows you to be on earth and recognizable as an individual. So, go ahead and admire your body. This can provide motivation for daily self-care.

BREATHE EFFICIENTLY

Once you are committed to self-care and healing, learn how to breathe efficiently, focusing on your outbreath. Restoring health and well-being requires energy, and breathing is the source. Since breathing has an impact on every organ system, muscle and cell in your body, it serves as a springboard to launch a healing journey. When you have understood, learned and used the focus on the outbreath, other layers of healing and well-being will emerge.

There are three reasons why breathing affects the whole body. Let's start with the vagus nerve—the tenth cranial nerve—which is the longest and most complex of the twelve cranial nerves leading from the brain stem to the far reaches of the body. The vagus nerve wanders from the brain stem all the way to the colon, along the way connecting with the middle ear, vocal cords, heart, lungs and intestines. In addition, the vagus nerve interacts with the autonomic nervous system, which regulates involuntary physiological processes like breathing, heart rate, blood pressure and emotional states. Your outbreath has a positive influence on this nerve and all the organs it enervates.

The diaphragm is the second reason breathing affects total well-being. Though it is the most important muscle of respiration, the diaphragm is not under your conscious control, but you can affect it by alternately

GLOSSARY OF TERMS

ALVEOLI: Microscopic, grape-like sacks at the end of the conducting airways, with specialized cells that facilitate the passage of oxygen into the blood.

BLOOD OXYGEN SATURATION: A measure of how well your blood is able to transport oxygen throughout the body, easily measured with a "finger cuff" oximeter. "Normal" is 95 percent and above; "acceptable" is above 89 percent.

BRONCHI: The conducting airways, of diminishing size, that split right and left from the trachea (windpipe) and deliver air deep into the lungs.

CAPILLARIES: Microscopic blood vessels that allow for passage of gases back and forth from blood to lungs to heart to tissue.

CILIA: Microscopic hairs that line the bronchi and wave up toward the mouth.

EMBOLISM: A blood clot that obstructs an artery or lung.

EPITHELIAL TISSUE: Forms the outer layer of the body or is the lining of the lungs, digestive tract and hollow structures. Epithelia characteristically have little blood supply.

FIBROSIS: Abnormal stiffness, caused by scarring of tissue.

IDIOPATHIC: Of unknown origin.

MUCOCILIARY ESCALATOR: The teamwork of cilia and mucus in the bronchi. The cilia constantly wave toward the mouth, and the mucus, with its trapped particles, rides on top of the cilia.

SALINE: Normal saline has the same salinity as body fluid and feels comfortable when used to clean the filter—your nose. The recipe: one-half teaspoon sea salt in one cup of water. Keeps without refrigeration.

TRACHEA (windpipe): Starts where the back of the throat splits into the airway in front and the esophagus in the back of the neck. The trachea extends to the carina, located behind the top of the breastbone. At the carina, the trachea splits into the right and left main bronchi.

I advocate the approach known as the BreatheOut-Dynamic system (BODs), developed by an Olympic trainer. squeezing (outbreath) and releasing (inbreath) your belly muscles. In 2018, Italian researchers shed new light on the broad array of diaphragmatic functions, illustrating why the diaphragm is not only "the motor muscle of breath" but is essential to many other processes affecting wellbeing.⁴ These include "expectoration, vomiting, defecation, urination, swallowing, and phonation." In addition, these authors pointed out, the diaphragm influences the body's metabolic balance; stimulates venous (blood on its return to the heart and lungs for oxygenation) and lymphatic return, "thereby creating the correct relationship between the stomach and the esophagus to prevent gastroesophageal reflux"; is essential for posture, locomotion and upper limb movement; influences "the emotional and psychological spheres"; and can diminish the perception of pain.

The third reason that a focus on breathing can make a profound difference in well-being is that, in our twenty-first-century culture, the activity we call "breathing" is basically ignored. For most of us, breathing is an automatic function, that is, it runs without conscious involvement. It's on automatic pilot. You think, "This is great; one less thing to deal with." However, the lack of attention to breathing creates rapid, high chest breathing with little diaphragmatic movement, which negates all the benefits mentioned above. So, when you start to pay attention to your breathing and learn how to breathe efficiently, the payoff can be big. And when you focus on an active, spine-stretching outbreath and a passive, relaxed inbreath, the payoff is enormous.

No matter which breathing method you use, when you focus on breathing, there are benefit. For two reasons, however, I advocate the approach known as the BreatheOutDynamic system (BODs), developed by an Olympic trainer.⁵ First is its efficiency, generated by a focus on the active, spine-stretching outbreath for energy and relaxation. The inbreath, on the other hand, is short, passive and relaxed—it happens all by itself, if you allow it. This is the opposite of "regular" breathing. The second reason I champion BODs is because it supports physical activity—as well as management of anxiety, fear, pain and stress, all without drugs.

RECOGNIZE MOVEMENT AS A HUMAN IMPERATIVE

The human body is designed for movement, whether it is movement of air and blood, arms and legs, food and drink, the bowels or urine. And breathing is the foundation of all movement.

For the purposes of this article, let's focus on the movement of air, blood and mucus—the contents of the lungs and associated structures. The intricate dance between air and blood begins in the lungs where oxygen is sifted out of air for passage from lung tissue—the alveoli—into the circulatory system with its microscopic capillaries surrounding the lungs. Capillaries also facilitate the passage of carbon dioxide from blood into the lungs and then out of the body with an exhale. Our sedentary lifestyle, along with chronic high chest breathing and damaged lungs, have compromised this essential movement of gases.

Josiah Child, MD, chairman of emergency medicine at Los Alamos Medical Center in New Mexico, is a BODs athlete. In my book, *Just Breathe Out—Using Your Breath to Create a New, Healthier You*,⁶ I share his explanation of why BODs enhances the body's ability to welcome oxygen into the bloodstream at the capillary interface and efficiently eliminate carbon dioxide. He credits BODs with his own ability to overcome two embolisms and return to work after debilitating Covid experiences.

To explain the process of oxygen entering the blood, Dr. Child uses the metaphor of a cruet of oil-and-vinegar salad dressing. Unstirred, the lighter oil remains at the top, while the heavier vinegar remains at the bottom. Now picture air instead of oil, and blood instead of vinegar. With a sedentary lifestyle, a static rib cage and lungs are similar to the unshaken cruet. In order for oxygen molecules in the air to join the blood on its journey around the body, oxygen must mix with blood. Air must descend deep into the lungs and blood must ascend in the capillaries that hug the lungs. The inactivity of twenty-first-century life leads to an ineffective mixture of blood and oxygen. The result is low-or no-oxygenation of every organ system, muscle and cell in the body.

Using BODs, the active outbreath and pas-

sive inbreath create the vacuum/suction that promotes efficient and effective mixing of air and blood. This simple switch in practice can overcome many of the pitfalls of sedentary living. And when BODs is coordinated with movement—including rising out of bed, activities of daily living, making love, daily exercise routines and sports—your function improves and anxiety, fear, pain and stress diminish.

HYDRATE AND EAT, WISE-TRADITIONS-STYLE

Water, essential to all life, keeps normal processes functional. How do you determine your daily intake? The modern-day recommendation is to drink six to eight eight-ounce glasses of water every day. But plain water can also deplete the body of minerals. It's best to add a quarter teaspoon or so of unrefined salt to an eight-ounce glass of water; other good sources of water include salted broth and soup, raw milk and lacto-fermented beverages. And let's not forget "metabolic" water, which is formed right in the cells when we metabolize fats. Those who consume a high-fat diet don't need to drink as much water as the experts recommend.

HANDS-ON RESPIRATORY THERAPIES

Outbreath-focused breathing promotes the movement of air out of and into the body, as

well as the movement of air and blood within the lungs and into blood circulation. Another substance in the lungs needs to be kept on the move. It is mucus—the sticky, slimy, essential substance that lines internal body surfaces. In the lungs and airways, mucus moistens, lubricates and protects the body from unwanted particles and chemicals.

While excess mucus is generally not an issue with pulmonary fibrosis such as that observed with long Covid, it is important to keep all mucus thin with adequate hydration and other supportive techniques. These include effective focused breathing; huff coughing; clapping (also called percussion); postural drainage; and vibration.

Coughing can wear you out, and rhythmic huff coughing can replace it. A huff is a soft, quick outbreath, through mouth or nose. This belly-force of exhaled air assists the microscopic hairs called cilia to move mucus up your airway, and preferably into your mouth. But the mucus might slide into your stomach where it will be processed.

Clapping (percussion) is a manual technique of gently but firmly slapping a cupped hand against the ribs, which hide the lungs. This wave of energy—a type of vibration—thins the mucus and can even dislodge it, whether you have a common cold, flu or other issue.⁷ Respiratory therapy did not "invent" clapping but rather Outbreathfocused breathing promotes the movement of air out of and into the body, as well as the movement of air and blood within the lungs and into blood circulation.

NUTRITION FOR HEALING THE LUNGS

The most important nutrient for healing the lungs—indeed healing anywhere in the body—is vitamin A. Vitamin A is the nutrient that tells the stem cells how to differentiate—how to become a heart cell or a brain cell, for example. In the case of the lungs, it is vitamin A that can tell the stem cells to create the alveoli cells, rather than make bronchial cells. Any thickening and scarring rather than normal cell replacement is a sign of vitamin A deficiency. Vitamin A is needed to direct an orderly—rather than chaotic—transition of stem cells to differentiated cells.

Liver (especially poultry liver), cod liver oil combined with high vitamin butter oil or Australian emu oil, butter and egg yolks from pastured animals, and most animal fats supply vitamin A. Remember that vitamin A requires balance with vitaminw D and K2, which these same foods will supply.

The other important nutrient for the lungs is saturated fat. The lung surfactants—those molecules which facilitate the passage of air into and out of the lungs—contain two saturated fatty acids. When unsaturated fatty acids or trans fatty acids get incorporated into the lung surfactants, the lungs will not work properly. For example, numerous studies have shown fewer lung problems such as asthma in children brought up on whole milk and butter. Avoidance of industrial fats and oils—and consumption of plenty of butter, lard and tallow—is essential for long Covid recovery, and indeed for treating any condition of poor lung function.



LUNG SURFACTANT WITH TWO SATURATED FATTY ACIDS adapted it from the ancient tapping traditions of yoga, tai chi and qigong.⁸ You can accompany the clapping with huff coughing and your active outbreath, all of which push the mucus from the alveoli into the bronchi for elimination via the mucociliary escalator. One precaution is advised: Do not clap over any implanted device such as a pacemaker.

Your right lung is the place to begin clapping, whether you clap your own rib cage or have a partner do it. Because of the geography of the lungs and the angle at which the trachea splits into the right lung and left lung, the right lung is most often the congested one, so start clapping your right lung while lying on your left side. Your right lung and its airways can then drain the mucus into your trachea for elimination. Be sure to give your left lung some attention as well. With fibrosis, your vibration might not bring up any mucus. That's okay.

Here's a quick clapping "how-to": cup each hand and gently clap or slap each hand on your right ribs, covered with clothing or a cloth, for one to three minutes, as tolerated. Then cough and, if possible, expectorate. Continue clapping wherever you have ribs-under your collarbone, on the lower front, back and side. You can assess the effectiveness of your efforts by the sound of your cough. Sometimes the littlest piece of mucus generates a raucous cough. This therapy can continue for twenty to thirty minutes, one to three times a day. A good tutorial on clapping of both lungs is available at Mary and Peter Frey's "The Frey Life" channel on YouTube; though they are not medical professionals, their "how to do manual chest PT [physical therapy]" video clearly and accurately demonstrates clapping, vibration and postural drainage.9

Postural drainage, which accompanies clapping, is a means of positioning your body so that lung segments drain into the larger airways that lead to the trachea. Each position facilitates the movement of mucus up the convoluted bronchi, for elimination by swallowing or spitting. Each position drains different lung segments. The basic drainage positions include sitting up straight, lying on the right side, lying on the left side and lying flat. Each of these positions has several modifications, including leaning forward and backward, and with buttocks elevated. In addition to clapping, there are many other types of vibration (see Resources sidebar, p. 37). Many types—including humming, singing, chanting and "om-ing"—involve your vocal cords, which sit in the trachea and are energized by the vagus nerve. You can also gently shake your body by placing your hands together in prayer position across your chest, then wiggling side to side, experimenting with speed. (It feels like the spin cycle on a washing machine.) This warms your body and moves energy around, which can be very invigorating.

In the twenty-first century, the clinical and home care environments have replaced manual clapping and vibration with various machines, including the cough assist (cough simulator), hand-held percussors and the vest (vibration). While these machines are efficient and can provide patients with a means of managing their own care, hands-on therapy now almost a lost art—is cost-effective and retains its value in personal health management.

No matter which method of vibration you choose—manual, mechanical or both—be fully focused on the process. Be with your body, visualizing the positive influence on your organs, tissues and cells. Notice sensations, feelings and changes in your comfort level. Keep records lest you forget your hard work and dedication to well-being. Be in praise of your efforts and share your knowledge and experience with the world.

PULMONARY REHABILITATION

With pulmonary fibrosis, the ability to be active in daily routines and exercise can improve with pulmonary rehabilitation. I witnessed this myself decades ago when I managed a pulmonary rehabilitation program at a large New Jersey hospital. The program participants had a variety of disabling lung issues, but even with these limitations, tailored exercise routines increased their ability to care for themselves. A prescribing physician admitted to me that the pulmonary rehab program had improved his patients' functionality so much that they no longer called him with crises. Anecdotal evidence like this is powerful and motivational.

Movement of solids, liquids and gases within your body is supported by the movement of your arms and legs. Walking—even very slow walk-



ing—is the best form of exercise, but if you are unable to walk, exercising in a chair or on a bed is also effective. Walking and other forms of exercise are most beneficial when combined with efficient breathing, such as taught with BODs. With practice, your muscles will understand the new routine of active outbreath and passive inbreath. This outbreath-focused, efficient breathing reduces your work of breathing. The result is that you save and gain energy—energy that you've "found" through efficiency.

MAINTAINING OXYGEN SATURATION ABOVE 89 PERCENT

People with Covid-damaged, fibrotic lungs can have difficulty maintaining a normal (95 percent and above) blood oxygen level. In the United States, a saturation below 90 percent usually initiates a prescription for supplemental oxygen therapy via nasal cannula. However, most of the pulmonary fibrosis research about oxygen supplementation is inconclusive in terms of stable improvement of blood oxygen saturation, and there are many unknowns about how much supplemental oxygen may be beneficial. As a 2017 report in European Respiratory Review showed, there is no evidence that supplemental oxygen actually reduces breathlessness in populations with fibrotic lung disorders; at best, the researchers concluded, supplemental oxygen might increase exercise capacity.¹⁰ The American Lung Association claims that supplemental oxygen supports organ function in general but provides no evidence for this assertion.11

One major benefit of daily exercise is that it may reduce the need for supplemental oxygen. Well-tuned muscles use oxygen more efficiently than weak ones. With regular exercise, your oxygen saturation may stabilize and even improve, especially if you are fully concentrating on BODs while exercising. Learn to love every minute you are moving your body and breathing efficiently. Additional benefits include reduction of anxiety, fear, pain and stress and increased energy and confidence.

It is important to remember that supplemental oxygen is a drug. As always, buyer beware. If you choose to use supplemental oxygen in order to maintain your oxygen saturation above 89 percent, there are several considerations to take into account. First, with what frequency will you be supplementing oxygen? For example, will it be twenty-four-seven, only for sleep or only with exercise? You must decide what makes sense to you. Being stressed by another daily routine can sap your strength, spirit and oxygen saturation. This is why I recommend efficient breathing, which allows you to be attached to your breath without being tethered to an oxygen tank. Talk with your health care provider and agree on a protocol that works for you. More oxygen is not necessarily better.

The second consideration has to do with the oxygen liter flow. Use the least amount that is effective, depending on your activity level. Request a prescription that allows you to determine the oxygen liter flow within a given range—for instance, two to five liters per minute. Again, oxygen is a drug and should be used judiciously. By combining efficient breathing with supplemental oxygen use, you can reduce your need for extra oxygen. A finger pulse oximeter, which instantly reports how well your blood is carrying oxygen, can help reveal this benefit.

At the same time—and this is the third consideration—do not become a slave to that handy-dandy pulse oximeter. It is not necessary to know what your blood oxygen saturation is from minute to minute. What *is* helpful is to document your saturation perhaps three times a day, especially before and after exercise, and then adjust the O_2 liter flow to maintain a saturation at or above 89 percent. Combine this valuable information with documentation of your emotions and physical comfort, all of which influence oxygen saturation.

HOME REMEDIES

Before modern medicine took over, people had access to home remedies from reliable sources such as elders and grandparents. Generation after generation established the effectiveness of these remedies—the proof being in the pudding. Then, in the twentieth century, drugs stole

RESOURCES

POSTURAL DRAINAGE AND PERCUSSION

- "Percussion." physio-pedia.com/percussion
- "How to do manual chest PT (airway clearance)." The Frey Life, Nov. 20, 2015. youtube.com/ watch?v=OAm4pm7ufQc

EFFICIENT BREATHING

BreatheOutDynamic system. outbreathinstitute.com

TAPPING AND VIBRATION

- Search "brain education/tapping" and "yoqi yoga and qigong" on YouTube.
- Vibration exercise | Body & Brain Yoga Quick Class. Body & Brain TV, May 21, 2014. youtube.com/ watch?v=waBUpovCuuE&ab_channel=Body%26BrainTV

the show and "evidence-based medicine" supplanted home remedies.

Nevertheless, home remedies still keep many of us from running to "urgent care" and coming home with a high medical bill. In the case of respiratory illness, keeping the airway filter—your nose—clear of excess mucus is essential and easy to do at home. To clear your nasal passages and sinuses, use normal saline (made by mixing half a teaspoon of sea salt in one cup of warm water) in a neti pot, or sniff it directly into one nostril at a time, followed by coughing and blowing your nose.

A naturopath recommended two remedies helpful in clearing mucus from the chest during a cold or pneumonia: onions and mashed potatoes. Slice a chunk of onion and breathe it deeply into your lungs. Place it near your head during sleep. Repeat for a few nights or longer, if necessary.

As for the mashed potato, use one large spud, warm (not hot), per treatment (minus the butter and salt!). This becomes a poultice placed directly on your chest. Lie comfortably on your back for twenty to thirty minutes, covering the mashed potato with a towel to preserve the heat. (You may wish to put a towel underneath you to catch the potato if it slides off your chest during the treatment.) Doing this twice a day for a few days can make a difference. You be the judge, and keep records for future generations. If you have a garden, compost the used potatoes!

WHERE TO START

Of all the information you have just read, the most important step is to love yourself unconditionally. This provides primary motivation for self-care. Self-love is enhanced by efficient breathing, which supports every organ system, muscle and cell in your body. Discover what works for you; then define and refine your healing program. Now you're ready to focus on the therapies that suit your needs and restore hope for a more functional future. Give your body a large dose of daily healing.

Betsy Thomason, a Vermont resident, began writing in the 1970s as a stringer for a community newspaper in northern New Jersey. Her articles have also appeared in specialty magazines for small business, respiratory therapists and the outdoors. She is the author of Just Breathe Out—Us-

ing Your Breath to Create a New, Healthier You (North Loop Books, 2016). For more information, visit her website at outbreathinstitute.com or contact her at bzthomason@gmail.com.

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A Prison Soy Saga

By Larry Harris, Inmate in the Illinois Department of Corrections

t sixty-three years old, I am the poster boy for the detrimental effects of a soy-based diet. I hope by telling my story I will open the public's eyes—I want to make a difference before I go quietly into the night.

I am a convicted felon housed in the Illinois Department of Corrections (IDOC). In January of 1994, I was found guilty of two counts of armed robbery (a crime I did not commit). I received a forty-five-year sentence on one count, and a twenty-year sentence on the second count, to run consecutively for a term of thirty-two years and six months. This makes me the perfect state lab rat to show the detrimental effects of a soy-based diet on the male body.

When I entered the IDOC in March of 1994, they still served real food: chicken, turkey, eggs, beef, pork, pizza, shrimp, fish. I believe there were organ meats mixed into the ground beef. At the prison where I was housed, an African American woman named Fanny Mae ran the kitchen. Her menu and food were great! On this diet, I was healthy and maintained my physique as an amateur and professional boxer.

ARRIVAL OF THE SOY DIET

All that changed in 2003 when Rod Blagojevich became governor in Illinois.¹ Slick Rod owed a political debt to the Archer-Daniels-Midland Company (ADM) located in Decatur, Illinois. He sold us out to ADM, a major producer of soybean oil. All the soy sludge left over after processing the bean replaced the real meat in our diets.

Governor Blagojevich removed the real meat. He fired the dietary manager in Springfield and brought in a dietary manager trained by the soy industry, who brought the soy diet to the prisons, including the Menard Correctional Center, where I was housed in January of 2003.

The first was a box of dust labeled "100% soy chili." It was thrown into a steam kettle with hot water and poof! The dust swelled up into a nasty-smelling chili.

Governor Rod Blagojevich has a brother who owns some poultry farms in Tennessee. Slick Rod gave him the contract to supply the Illinois Correctional Industries (ICI). The ICI plants went to work mixing the soy sludge with the poultry scraps to create the hot dogs, meat patties and fake hamburger for the IDOC prisoner population.

I was a "food cart man" for the serving lines at Menard. I would load the steel inserts onto my cart and haul them to the heaters. I would then fill the steam tables and set up the lines with hot food. So, I handled the food daily for the breakfast and lunch meals. I lived with the men who consumed the food each day.

WEAK AND SICK

Soon, the men started getting sick, myself included. At first it was explosive diarrhea with very bad intestinal gas. A month after the reserves of real food were gone, the daily soy meals began causing chronic constipation in the men.

The men could not digest the high amounts of soy. By 2006, several men had been taken to an outside hospital to have sections of their intestines removed. The soy food had set up in their bowels like concrete. I was starting to suffer bad constipation myself. It would be five to seven days before I could move my bowels. When I did, it was like trying to move a concrete block through a garden hose.

I started to develop a skin rash on my shoulders, neck and the back of my head. The skin on my face cracked and bled. My body grew lethargic. The high amount of goitrogens in the soy was affecting my thyroid gland.

From 2003 to 2005, the soy had me really weak and sick. I lost my job in the kitchen. The Menard prison went on extended lockdowns, so I could not buy commissary food to sustain my health nor could I eat real food scoured from the kitchen. The soy was slowly killing me. I went to the health care unit and demanded a thyroid blood test but was denied.

All the doctor did was tell me not to eat the soy if it made me sick. But if I stopped eating soy, I would starve.

The ADM experiment on the male prisoner body had gone really bad by January of 2006. The men could not eat the food without suffering detrimental effects. But the IDOC was not going to admit this or change the soy diet. It was making too much money for ADM.

In 2005, the women in the IDOC were so sick that for three days they refused to go to the chow hall. The IDOC doctors examined them and found that the high levels of estrogen in the soy foods had messed up their reproductive cycles; their periods stopped. So, the IDOC quit feeding soy to the women but kept on feeding it to the men. Estrogen is not a hormone that men want to be ingesting daily. So, why would they keep feeding it to the men?

ADM had hoped its prison soy diet experiment would give a real media boost for selling its soy products to the public. But that is not the way it turned out. By 2006, ADM had given up on its campaign to convince regular men they could prosper on a soy-based diet, so they only fed it to the incarcerated, people in state nursing homes and children at poor school districts as a budget-cutting measure.

THYROID SUPPRESSANT

Soy is a thyroid suppressant and endocrine disruptor. By the start of 2006, I was suffering numerous signs of Hashimoto's thyroiditis disease. I did not know exactly what was wrong, but I knew the food was killing me, for I only got sick when I ate the soy. The high level of estrogen in my body was battling my testosterone for control. Soy was attacking my thyroid and testicles. I was suffering muscle structure loss, with no energy and sleeping twelve to fourteen hours a day. My bowels could not digest the food. I felt like I was dying.

Being on lockdown only allowed you out of the cell for one ten-minute shower each week. I could not get my hands on any real meat from the commissary.

One day on my way to the shower, I passed out cold due to a low heartbeat—a side effect of Hashimoto's thyroiditis. They took me to the Chester Memorial Hospital, where they found that my thyroid TSH was at 10.8 (normal is 0.4 to 4.0). The hospital gave me my first colon cleanse—a bottle of clear liquid that looked like Seven Up. Once the soy was out of my bowels, my heart rate went back to normal and my TSH started to go down. Then I was sent back to the prison.

In late May of 2006, I awoke and could not breathe. My body was gray, and I was sweating badly. I tried to get up, but the pain in my chest knocked me down. I arrived at the Chester Hospital again where they gave me another colon rinse. After a week of cleaning my bowels out, I was released from the Chester Hospital and sent to the cardiac clinic in Belleville, Illinois. This was the first of June 2006. The clinic put a pacemaker in my chest set at sixty beats per minute.

The surgeon told me I had a thyroid disease. When he put in the pacemaker, my thyroid TSH level was at 6.9. He told me to get it checked out when I got back to the prison. Most importantly, he issued a statement for a medical no-soy diet. The surgeon told me that soy suppressed my thyroid function, exacerbating a pre-existing thyroid weakness that ran in the family. For the first time in my life, I learned about Hashimoto's thyroiditis disease.

When I returned to the prison, I saw the prison doctor, Dr. Fienerman, who told me I would not get any thyroid treatment and that the soy food was not making me sick. He denied my medical no-soy diet. He stated I had no proof the surgeon was right. So, I started gathering the evidence.

I contacted my daughter, Amanda Carrasco, and a friend, Judith Trustone. They put my symptoms in an Internet search engine and found the Weston A. Price Foundation as a good source of information on the dangers of soy. From June 2006 to January 2007, I gathered my evidence on the detrimental effects of soy on the thyroid and the male body in general. The science was clear: the estrogenic compounds in soy have adverse effects on the male reproductive system and the thyroid gland. It was ugly stuff. I made copies and gave them to all the prison chiefs. Then I got another appointment with Dr. Feinerman.

I gave Dr. Fienerman copies of studies from the Cincinnati Medical Center, the Mayo Clinic and those posted at westonaprice.org, which the Weston A. Price Foundation staff had sent to me. He went to the warden. This was damning evidence the warden did not want the prison population to have—so the warden had me shipped to the Western Illinois Correctional Center in Mount Sterling.

Once I arrived there, I immediately asked for a thyroid test to prove the thyroid disease. It was now February 2007. I was down to about one hundred fifty pounds and looking really bad. I had to fight for medical care all over again. Once my grievance requirements were met, I filed a civil suit stating the Eighth Amendment claim of deliberate indifference to my medical needs.

SOY GOES TO COURT

This bold move brought the soy diet issue in front of Federal Court Judge Harold Baker, U.S. Central District Court in Springfield, Illinois. *Harris v. Brown, et al., 2007* was in the works.² The soy diet lawsuit picked up some press across the nation. *Prison Legal News* reported on it,³ as did the Weston A. Price Foundation.⁴

A benefactor took mercy on my wrecked body and sent money monthly to buy food from the commissary. With real meat, I started to rebuild my health.

I did the lawsuit *pro se*, which means I acted as my own attorney. A wise lawyer once said, "only a desperate man acts as his own attorney." He was right, but no lawyer in Illinois wanted to take on the ADM power behind the scenes in the state.

In 2008, the Weston A. Price Foundation supplied me with a lawyer, and we added other plaintiffs to the case. Soon, their doctors were allowed in the prison to examine us. By now, the IDOC medical staff and powers-that-be were taking notice of my fight. It was no longer a hidden secret but a lawsuit filed by a prisoner nobody cared about.

The WAPF doctors determined that my body was under-nourished. I was very low on many vitamins and minerals. They also documented

LARRY'S LEGAL BATTLES

Larry Harris is a prison lawyer who has won several important lawsuits. In *Harris v. Butler* (U.S. District Court, Southern District of Illinois, East St. Louis), he won a small compensation for being transferred to more restrictive prisons as punishment for his taking legal actions.

In *Harris v. Calloway et al.*, 2:17-cv-02075-MMM, he won the right to describe his conditions of confinement on social media—this case now allows all prisoners to communicate with the public via Internet postings. That case is in the damages trial stage. A jury will be picked to determine the amount of money Larry will receive in punitive damages.

A similar case (*Harris v. C. Brannon, et al.*, 4:19-cv-04235-JES) involves the East Moline Correctional Center and is currently in the summary judgment stage.

The doctor told me point-blank, "You have a sixty-five year sentence. You are a walking dead man. I will not spend any money on you." I filed a grievance, and their solution was to transfer me once again.

the skin rashes and infections—I was the state lab rat that had all the symptoms.

ADM and the IDOC moved quickly to silence and correct my actions. On December 3, 2008, they issued me a medical no-soy diet. This was a brilliant move on their part. Because I was now getting the proper medical treatment, their attorney went into court and argued that I no longer had a case. They had corrected the situation by issuing the medical no-soy diet and were no longer deliberately indifferent to my medical needs.

Judge Harold Baker stated that it was a sad fact that a prisoner had to raise the soy diet issue, but since Plaintiff Harris was now getting a medical no-soy diet, he had no Eighth Amendment claim. He issued summary judgment to the defendants. We lost the case because they silenced me with the medical care required. The other plaintiffs took the small buy-out offered.

BACK TO SOY

From December 2008 until April 2016, I received the medical no-soy diet—which often consisted of one boiled egg or a plate of beans for a meal—but at least I was getting real food. This was a move to get the Weston A. Price Foundation out of ADM's business.

Then I was transferred to the Danville Correctional Center where the health care administrator promptly canceled my medical no-soy diet. She stated I could eat the soy and get sick, and then she would treat me when I got sick. Following in my footsteps, too many prisoners were going to the health care unit, requesting thyroid tests and demanding the same medical care and diet I was receiving.

Since I was being given soy meals again, I moved through the grievance process to be allowed to shop once a week—normally it is every two weeks—and won. This quickly caused me to make enemies among the IDOC staff. They gave me a ticket and placed me in segregation for having my family and friends expose what was going on in the social media outlets.

The ticket was dismissed in January 2017. But I had been in segregation since October 2016 without the ability to buy commissary food. I had to eat the soy diet again to sustain my weight and strength. It hit me hard this time. By October 2017, I was bleeding from my bowels. I was at the Shawnee Correctional Center at the time and went to see the doctor, Alfonso David. I told him I was getting sick when I was forced to eat soy for any length of time. He ordered a colon cancer test, but I was never able to get the results. In the meantime, the prisoner body protested and was able to get commissary shopping weekly. Once I could get real meat and cheese again, the bleeding would lighten up or go away completely at times.

I requested a second colon test during the fall of 2018. The bleeding had started again, and I was having pain in my digestive tract. I was sent to the clinic to be given a colon cleanse drink again, but since that did not stop the bleeding, I was issued a colon test box for colon cancer. I followed the instructions and sent it back in. When I tried to get the result, the nurse practitioner told me it did not exist.

I got another appointment with Dr. David. He told me point-blank, "You have a sixty-five year sentence. You are a walking dead man. I will not spend any money on you." This was the last time I was seen by the medical staff at the Shawnee Correctional Center. I filed a grievance, and their solution was to transfer me once again, this time to the East Moline Correctional Center.

GRIEVANCES AND TRANSFERS

I arrived at East Moline Correctional Center in late March 2019 and immediately put in to see the doctor. This time, they issued me a hernia belt but denied my request for a cancer test. I was told I would have to file a grievance all over again. I started the action and of course told my family about it.

At East Moline, we could only shop twice a month—with a one-hundred-dollar limit. This forced me to eat soy again rather than starve, and of course the damage to my intestinal walls got worse. I was bleeding all the time now. Every morning I passed a pool of dark purple waste. The pain and burning started when I was again placed in segregation in September.

My daughter, who was running my blog site and Facebook page, posted about my medical situation and other problems at the East Moline facility. For this, I was again written a false ticket and given a disciplinary transfer into harsher confinement conditions at the Pinckneyville Correctional Center, transferring there on November 6-7, 2019, where I was retained in segregation status until November 13. The Illinois Administrative Review Board in Springfield expunged the ticket.

My daughter did not stand for this and complained to various authorities, and when I was placed back out into the general prison population, she contacted the governor's office. They contacted the IDOC director, who called my daughter and asked her where I wanted to be housed. She told them the Illinois River Correctional Center. I was shipped from the Pinckneyville prison to the Illinois River Correctional Center on February 5, 2020. At that point, I was still really sick and bleeding daily.

CIVIL SUIT WIN AND MORE RUNAROUND

A few months earlier, on September 30, 2019, I won a civil suit. The federal court ruled that the Danville Correctional Center staff (who had canceled my medical no-soy diet) had punished me illegally. The court told the IDOC staff they could no longer place me in segregation and could no longer transfer me to worse conditions of confinement, nor could they punish me for exposing the soy diet damage, my lack of medical care or the corruption and malfeasance going on in the IDOC.

It took a few months for the lawsuit win to trickle down the chain of command. But now I was safe. My daughter started posting a record of my medical crisis.

I was called to the health care unit in February 2020 and was told

FROM A PRISONER IN INDIANA

I am incarcerated at Wabash Valley Correctional Facility in Carlisle, Indiana. After reading a 2012 *Wise Traditions* article pertaining to soy diets in prison,⁶ I felt that it is only right to share the soy food situation here.

The state has contracted with Aramark as the food provider for all or most of its facilities. In the Aramark menus, all of the main dishes are made of soy. Typical soy-based main dishes include sloppy joes, country patties, tamale pie, goulash, shepherd's pie, meatloaf and Salisbury steak. Even a slice of cake or a cookie will contain soy on both the lunch and dinner trays.

For breakfast, biscuits and gravy, powdered eggs and pancakes are all served regularly. Biscuits and gravy as well as egg mix both contain soy chunks.

Lunch and dinner trays are always served with powdered drink mixes that contain aspartame, which causes a host of health problems itself. Breakfast trays are served with a milk substitute that contains aspartame and causes everyone terrible gas.

A small portion of vegetables is served with lunch and dinner, but fruit is not served on any tray for the general population; fruit is served to individuals who are on special diets because of health issues or religious preference. The small amount of veggies and lack of fruit does not and cannot combat or outweigh the amount of soy being served to us.

Many, many prisoners are suffering with different health issues: vitamin D and B deficiencies, gallbladder issues, thyroid surgeries, abdominal cancers and surgeries, bloating, constipation and a crystal, gritty-like feeling in the joints. I myself, forced to eat "state trays," suffer from constant abdominal bloating and unbelievable gas.

I believe the medical staff here knows the cause of these health issues but just keeps the door revolving while the state saves money by feeding us non-sustaining, low-grade food; ergo, Aramark makes a lot of money providing the service of poisoning and killing us slowly.

Even though we are prisoners, we are still citizens of this country and not cattle. The Constitution forbids cruel and unusual punishment, and court cases have stipulated that prisoners are to receive a sustaining diet. We need a voice to bring light to what's happening in the Indiana prisons.

I would be sent out to see a specialist, but in March 2020, prisons in Illinois were placed on Covid pandemic lockdown. I never received any treatment, and my commissary access was severely restricted. Finally in February 2021, my family and friends had seen enough. They took action.

My daughter sure does love me. She went to the governor's constituent affairs office. She called her senators and representatives. The heat rolled downhill fast. Doctor K. Osmundson, the prison doctor, was called up on the carpet. The director wanted to know why I was being denied treatment. The doctor's answer in defense was golden. Dr. Osmondson stated, "I pulled up Mr. Harris's commissary purchase items. He buys some spicy foods, so I determined that was the problem."

Dr. Osmondson relented and scheduled double hernia surgery. I was seen by a surgeon, Dr. Erin Bailey, at the Graham Medical Unit in Canton, Illinois. She ordered my blood drawn and explained the double hernia surgery I needed. But the blood test came back bad. I was anemic, with no iron in my red blood cells. I was too weak to operate on, so the hernia operation was put on the back burner.

CANCER RISKS OF LONG-TERM SOY DIET

When I went back out to see surgeon Bailey, she ordered an immediate colonoscopy, for my blood showed that I had cancer. On June 21, 2021, I awoke from the colonoscopy, and there was Dr. Bailey with the bad news: stage three colon cancer, almost stage four. I had an eight-andone-half-inch tumor in my colon. The prison medical staff had refused to address the cancer from October 2019 to June 2021, during which time the soy consumption had almost pushed the cancer to stage four.

On August 3, I was placed in the infirmary to do another two-day colon cleanse—two days of not eating, while drinking the most foul liquid to clear my bowels. On August 5, Dr. Bailey operated, removing the tumor and stitching my bowels back together. I awoke without a colon bag—that was a great blessing. I owe Dr. Bailey for my life from that day forward, for I did not have much left before she fixed me.

But all was not well because the cancer had spread to the lymph nodes in my small intestine. The medical nightmare was not over yet. "Chemo" was the new word. I was introduced to Dr. Fiskin, the chemo specialist in Canton, who explained how bad a situation I was in. He said it would require a heavy level of chemo, but first, Dr. Fiskin explained, I had to get my iron level right.

On September 28, I was moved into an isolation cell in the infirmary. They said my immune system was too weak to have me around other prisoners and staff who might infect me with something. On September 29, I went out to the chemo treatment center. My day started with a three-hour drip of iron into my bloodstream through a port that Dr. Bailey had surgically placed in my chest. After that, I received another three-hour drip of the chemo cocktail. Then they placed a chemo pack in a sling around my neck in order to shoot chemo into my bloodstream for the next three days.

The schedule was twelve sessions every other week. I would go to the cancer treatment center and receive the three-hour drip. Then the pack went around my neck until Friday evening. I would return to the hospital on Friday night to have the line into the port removed and flushed, and a plastic seal placed over the port so I could shower. On March 26, 2022, I had the neck pack removed for the last time.

For most of the chemo treatment, I was allowed to shop weekly to sustain my health and weight. But on December 2, 2021, Warden Clark terminated my doctor's order for a weekly shop. I was once again faced with the decision at each meal: to eat the IDOC mystery meat and feed the cancer or slowly starve. I was not going to feed the cancer again, so I often went hungry.

A TEN-YEAR SENTENCE?

A lot of the guys who have served long sentences with me are getting cancer, too. It seems like it takes about ten years. If you eat soy-based meals for ten years, some type of cancer will appear.

Before I go quietly into the night, I want the public to know just what

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this soy diet experiment has done to the men incarcerated in the state of Illinois. Remember, we live in a sterile environment—no tobacco, no alcohol, no illegal drugs.

Soy and the human digestive tract just do not work together. This is why the FDA states, "Do not consume more than twenty-five grams of soy protein a day."⁵ This is a warning to cover their backside, for they know from their Illinois prison experiment the detrimental effects that soy has on the human body.

On June 15, the prison gave me another CT scan. The results showed that the colon cancer was gone, but they found some spots on my liver. In June, I got great news—a liver biopsy showed that the two spots on my liver had shrunk to half the original size. So, the doctor stopped the biopsy and did not stick the needle into my liver.

A new early-release program in Illinois gives me hope for release from prison by the end of 2022. If I can manage to avoid all soy until then, I have a chance to walk away from this nightmare a healthy man.

Larry Rocky Harris, in prison since 1994, is the author of the 2017 book, Never-Ending Nightmare, available on Amazon. For updates on Larry, visit his blog at freelarryrockyharrisx2.com and his podcast at freerockynation. org. Larry is also on Patreon (patreon.com/ freerockynation), Facebook (LarryRockyHarris1959.com) and Instagram (freerockynation). Larry asks that you sign up as a follower on his Instagram page. His YouTube channel is broadcast on Sunday evenings.

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Reading Between the Lines

By Merinda Teller

Baby Tongue-Tie: Eliciting Controversy for Two Thousand Years

In the early 1970s, breastfeeding in the United States reached an embarrassing all-time low, with only 24 percent of mothers attempting to nurse their newborns.¹ Fast-forward to the present, and the infant feeding picture is quite different. Over 83 percent of babies get a chance at breastfeeding—albeit with one in five receiving supplemental formula within their first two days of life—and at six months, about 56 percent are still nursing, 25 percent having done so exclusively for the first half-year.²

As the number of breastfeeding mothers rises, so does the number of moms encountering breastfeeding challenges. Problems such as breast pain and latching difficulties are among the major factors prompting early discontinuation.^{3,4} Breastfeeding support and advocacy organization La Leche League International (LLLI) counsels that most such issues can be solved with adjustments to positioning and attachment—but when "good breastfeeding management" doesn't do the trick, the next step advised by LLLI is to consider tongue-tie and, by implication, tongue-tie intervention.⁵

AN OLD BUT SUBJECTIVE DIAGNOSIS

The lingual frenum (or "frenulum") is the tissue connecting the underside of the tongue to the floor of the mouth. Tongue-tie (medical name "ankyloglossia"), for some reason diagnosed more often in boys than girls, is defined as an "anomalous"—meaning short or tight—lingual frenum that interferes with "normal" tongue movement. But "anomalous," it turns out, is a rather subjective term.⁶ There is no meaningful consensus on how common infant tongue-tie even is, with estimates ranging from a low of under 1 percent to a high of about one in ten babies.⁷

In cases where tongue-tie is diagnosed and deemed—often subjectively—to cause breastfeeding problems, babies may end up undergoing a procedure called a frenotomy or "surgical release" (or a related procedure called "frenectomy"). Frenotomy typically is performed by either a pediatric dentist or ear, nose and throat (ENT) doctor and involves the cutting or clipping of the lingual frenum, either with laser or sterile scissors.

This sounds straightforward, but in 2019, concerned researchers called attention to the complete lack of evidence that "would enable an understanding of what encompasses normal [lingual frenulum] anatomy."⁶ They also emphasized that no "clear anatomical variables have been identified that have direct correlation with limitation of specific tongue movements, or improvement in any objective outcome measures following frenotomy."

As it turns out, the controversy about tongue-tie and surgical intervention dates back millennia.⁸ Early writers not only argued about the wisdom of tampering with the tongue which Greek physician-philosopher Galen described as having been "prepared most fully and perfectly by nature"—but also debated when and how to wield the knife. In the case of midwives, who competed with surgeons for the right to carry out the intervention, the tool reportedly was the midwife's little fingernail, deliberately kept long.

In earlier times, interestingly, the rationale for frenotomy more often than not had to do with the claim that the procedure would improve the patient's speech. Nowadays, speech-language pathologists may recommend tongue-tie release for speech delays in older children (a practice that some believe is not supported by empirical evidence),^{7,9} but in infants, it is the late twentieth-century breastfeeding renaissance and the emergence of legions of lactation specialists eager to help moms breastfeed successfully that appears to have shifted the primary justification for frenotomy to breastfeeding support.⁸ The number of babies proceeding directly from breastfeeding difficulty to tongue-tie diagnosis to frenotomy has, without a doubt, exploded.

THE FRENOTOMY BOOM

Many practitioners agree that casual visual inspection of the tongue and frenum is an unreliable way to assess tongue-tie, so some have developed classification and scoring systems. Even so, researchers writing in 2020 in the European Journal of Pediatrics argued that there is no clear relationship between tongue-tie scores, feeding problems and frenotomy outcomes; they urge clinicians to "first do no harm," suggesting that lingual frenotomy for breastfeeding problems is "not as innocent as generally accepted."¹⁰ Others sum up the situation this way: "There's no good evidence that an untreated tongue tie will lead to bad outcomes down the line-or that a frenotomy will help with the breastfeeding relationship in the short term."11

Despite these cautions, the number of babies proceeding directly from breastfeeding difficulty to tongue-tie diagnosis to frenotomy has, without a doubt, exploded. A U.S. inpatient study published in 2017—the first-ever national study—reported an "exponential" 834 percent increase in tongue-tie diagnoses from 1997 to 2012 and, over the same period, an astounding 866 percent rise in frenotomies.¹²

Similar trends are evident in Canada, Europe and Down Under.¹³ In Australia, which even has a Tongue Tie Institute, frenotomies increased by 420 percent from 2006 to 2016.¹⁴ In New Zealand, a researcher states, "Potentially 10 to 20 per cent of all infants in New Zealand are having it done where, in fact, more like 3 per cent would actually benefit from it."¹⁵ French doctors alarmed by the trend warn that frenotomy "should only be done in the case of a genuine issue and not as a matter of course or as a preventive measure."¹⁶

Even among lactation experts, opinions are mixed. Nancy Mohrbacher, author of the *Breastfeeding Answers* textbook for lactation specialists as well as books for nursing mothers, commented some years ago on the tongue-tie phenomenon, stating "What started as a problem for a small percentage of babies seems now to be an epidemic."¹⁷ Mohrbacher added, "Because tongue tie is the root cause of the problem for [only] a minority of babies, it is a terrible place for most mothers to start." Her advice: "Contact someone who can help adjust baby's latch and evaluate baby's feeding pattern."

Commenting on the 2017 U.S. study and the "extreme popularity" of the tongue-tie diagnosis and surgical release, *Atlantic* writer Rachel Morgan Cautero pointed out that while the study's hospital-based results were "fairly incredible by any standard," they were probably an underestimate because they did not include data from outpatient settings.¹¹ The study authors themselves noted, "Anecdotally in clinical practice experience there seems to be a corresponding increase in infants diagnosed and treated for ankyloglossia in outpatient settings as well."¹²

The study authors agreed that the increased spotlight on breastfeeding and the greater availability of lactation consultants assessing breastfeeding problems is a likely explanation for the greater attention to tongue-tie and the dramatic upswing in oral surgery for infants.¹² However, they also noted that the trend is not across the board; babies from households with private insurance were "disproportionately" more likely to receive a tongue-tie diagnosis and intervention than babies from families with public insurance (Medicaid).

In terms of cost, a study published in *JAMA* in 2019¹⁸ reported frenotomy fees ranging from eight hundred fifty dollars to upward of eight thousand if performed under general anesthesia; practitioners experienced in office-based frenotomy do not recommend general anesthesia. Postoperatively, parents are on the hook for in-home measures designed to prevent relapse ("stretch[ing] and massag[ing] their child's oral frenula, cheek, and tongue multiple times a day") but also may be asked to take their baby for multiple craniosacral or oral myofunctional therapy appointments.¹³

Back in 1791, a Berlin obstetrician raised the question of practitioners' motivation for subjecting babies to frenotomy, stating, "Frequently the parents are deceived, for profit, greed and ignorance this aid is abused, and one unties where nothing is tied."⁸ In the present day, critics similarly question the "flourishing industry of frenotomy" and its subsidy by insurance providers.¹³

Those who believe that more infants are undergoing frenotomy than necessary argue that the rush to clip babies' tongues may conceal other potential causes of poor feeding or crowd out other solutions. The *JAMA* study found, for example, that non-surgical support for breastfeeding difficulties could, in most cases, take care of matters.¹⁸ The impetus for the study came from the researchers' observation of "people sent in for something they weren't sent in for before" and their question, "Are all of these procedures necessary?"¹⁹ With comprehensive feeding assessment and targeted interventions offered by a multidisciplinary team, almost two-thirds of the babies (63 percent) initially referred for tongue-tie surgery did not undergo it, an outcome that the authors celebrated as "avoiding potentially harmful procedures... and maximizing the quality of care delivered."

New Zealand researchers similarly observed that developing a "new clinical pathway" involving multidisciplinary assessment of tongue-tie in babies experiencing feeding challenges "led to a marked reduction in frenotomy intervention rate," from 11.3 percent to 3.5 percent over a two-year period.²⁰ They also noted that "overall there was no difference

in the feeding pattern of infants who either received or were declined a frenotomy."

THE EXPLANATION FOR EVERYTHING

Discussing the tongue-tie phenomenon, a physician has argued, "There is no public health reason to explain the increase, only an increase in awareness and diagnosis."²¹ The *Atlantic's* Cautero suggests that greater awareness from within the mommy community itself is a major factor feeding the "frenulum frenzy." Her *Atlantic* article [italics in original] begins:

"It's uttered in hushed tones during mommy-and-me yoga classes and at Montessori-school drop-offs, discussed ad nauseum in breastfeeding support groups and on parenting message boards. It's called tongue tie, and it's *everywhere*. In online mom groups, it's blamed for all sorts of parenting woes. Baby isn't gaining weight, or won't take a bottle? *Have you tried checking for ties*? Kid won't nap? *It's probably related to tongue tie*. Baby have a rash? *Check under the tongue*!"¹¹

Others concur that the increased attention to tongue-tie "is being led by consumer demand," with social media and social influencers playing a major role.²¹ Is it a fad? A pediatrician who directs a university lactation program outlines "two questions at play," stating "One is the individual question of how parents should be making this decision," while the second is "the public health issue and the 'hotness' of this debate."²²

Setting aside the debate among professionals, parental satisfaction to the extent it has been measured—is generally high. (Preverbal babies don't have much of a say in the matter.) A New Zealand study exploring parental perceptions found that "Parents were willing to go to significant lengths to access the procedure" beforehand, and afterwards, four out of five sets of parents reported "moderate" or "significant" improvement in the issues that prompted them to seek frenotomy for their babies.²³ About a third of mother-infant pairs studied (thirty-three of ninety-three) went from not fully breastfeeding to fully breastfeeding. A recent Danish study likewise reported "compelling" parent satisfaction, with 78 percent of mothers who had experienced breastfeeding difficulties or pain reporting a "moderate to high degree of symptom relief" and 95 percent of parents stating they would "have a frenotomy performed on their child again under similar circumstances."²⁴

Not all mothers are thrilled with their baby's experience, however. One Australian mom interviewed after the fact spoke of the pressure she encountered from a dentist who told her "in no uncertain terms" that she would be "setting [her] child up for failure" if she did not get her daughter a frenotomy, even though no one had actually observed them breastfeeding.¹⁴ Describing the vulnerability of new motherhood—featuring pain and sleep deprivation—the mother succumbed to the dentist's pushiness, but after "blood curdling" screams and a burning smell emanated from her daughter during the laser surgery, the mom pronounced the procedure "absolutely barbaric."

THE RISE OF LASER

Historically, frenotomists relied on an "arsenal" of surgical scalpels, scissors, curved knives and "fork-like instruments."⁸ Nowadays, many dentists and physicians have shifted their treatment of choice to laser—"Light Amplification by the Stimulated Emission of Radiation"—

AND THEN THERE'S LIP-TIE

In addition to tongue-tie, moms experiencing breastfeeding difficulties may be told that their babies also have "liptie." As discussed by UK lactation consultant and tongue-tie practitioner Sarah Oakley, lip-tie is an even murkier diagnosis than tongue-tie.⁴⁹ According to Oakley, common diagnostic classification systems "rely solely on appearance" of the labial frenum and not only fail to assess function but fail to acknowledge that the tethering that stretches "from the upper gum to behind the upper lip in the midline is normal anatomy."

Describing exchanges with widely known tongue-tie experts, Oakley has written: "I asked them how they decide a lip requires [surgical] division. The responses were that it is based on the presence of tension and a general acknowledgment that they were probably all applying different criteria. . . reflected in the fact that they all reported varying numbers of babies presenting with tongue-ties who also require lip-tie division." These "varying numbers" translate to anywhere from one in five "to almost all babies with tongue-tie" also being subjected to surgical lip-tie intervention. She notes that lip-tie surgery comes with a greater risk of pain and bleeding (because a labial frenum is "much more sensitive and more vascular than a lingual frenum") and adds that among doctors and dentists, opinions about the procedure's safety are mixed.

Finally, Oakley observes that lip-tie intervention is a stop-gap and generally does not address underlying causes of breastfeeding difficulties. Her conclusion: "[O]ur focus needs to be on supporting mothers and babies with our breast-feeding skills to understand and overcome the challenges they face and not to encourage them to pursue the idea that by simply cutting yet another piece of membrane in the mouth all of their issues will be solved."

One of the primary distinctions between the scissor and laser procedures has is the ability of the parents to be with their baby during the procedure. which comes with its own armamentarium of instruments, including (depending on the method) topical or injectable local anesthesia, "mouth props, loupes with magnification and high-intensity light, grooved director. . . for tissue deflection and isolation along with finetipped hand-held electrocauteries."²⁵

Practitioners use the term "laser" to refer to several different types of devices, including Bovie electrocautery and soft-tissue-cutting CO₂ diodes (with the latter nicknamed "hot tip cautery" because it burns off the soft tissue "on contact with the hot charred glass tip")²⁶ as well as laser devices with the fancy descriptors of "neodymium-doped yttrium aluminum garnet" (Nd:YAG) or "erbium-doped yttrium aluminum garnet" (Ed:YAG). Some frenotomy websites praise the diodes as "ideal. . . for both cutting and coagulating soft tissue,"27 claiming less postoperative swelling and pain,²⁸ but others-such as Peter Vitruk, founder of the American Laser Study Club-argue that "laser" is in fact a misnomer for the diode method.²⁶ In his experience, the diodes can lead to "excessive post-op pain, excessive tissue charring, deep thermal necrosis, or. . . excessive bleeding." Vitruk speculates that when infants-"for whom painkillers are not an option"-undergo diode frenotomy, the aftermath may not be very pleasant.

One of the primary distinctions between the scissor and laser procedures is the ability of the parents to be with their baby during the procedure; because of "safety measures," parents are not allowed into the treatment room during laser procedures but can hold their baby when scissors are used.²⁹ A doctor who describes the CO₂ device as her surgical instrument of choice admits that the scissor procedure is also faster, and that "pain associated with the laser procedure has a delayed effect"; however, her take-home message is that the provider's skill set "and knowledge of how the tongue tie affects each patient" ultimately are more important than the chosen tool.²⁹ Other frenotomy providers agree, stating that while "[a]nyone can buy a laser," providers' "skill and understanding of how tongue tie affects breastfeeding" should be the deciding factors.³⁰

but a lack of relevant research means that "no conclusive suggestions regarding the method of choice can be made."³¹ The author of a UK-based parenting support blog agrees that many of the claims used by frenotomy practitioners to argue that laser methods are superior to scissors are "unsubstantiated and non-evidence based." While not "anti-laser," the blogger questions the assumption that "something new and expensive is automatically better," noting decades of successful frenotomy performance with scissors as well as the fact that "the research supporting practice is using [scissors], not a laser."³² The author makes other points as well, including the following:

- The laser procedure (as already noted) is "significantly slower than with scissors, which only takes several seconds."
- Pain scores with laser "may be higher and for a longer duration, resulting in many laser providers advocating the use of anaesthetic."
- Adults treated with laser describe "significantly higher levels of pain post procedure" and a burning sensation, which, the author states, is "of course. . . exactly what it is."
- For older babies, "the separation from parents and restraint could be as upsetting as the procedure itself."
- Research specific to babies (rather than older children) is needed.
- "[W]hat happens post procedure is much more complex than we realise."

COMPLICATIONS UNDERREPORTED AND UNDERSTUDIED?

Early advocates and critics of frenotomy did not shy away from acknowledging the prospect of complications. In the mid-eighteenth century, obstetric textbooks regularly listed complications such as bleeding to death.

Modern advocates of frenotomy, on the other hand, claim a stellar safety record, but the fact is that study of frenotomy complications is only just beginning, and some believe that complications are going unreported.³³ In an online survey administered in late 2019 to physician and dentist members of the Academy of Breastfeeding Medicine, 61 percent of the physician/

Modern practitioners may be keen on laser,

dentist respondents had cared for a baby with either a complication or a misdiagnosis (defined as a baby "subsequently diagnosed with another problem that could have caused the infant's breastfeeding difficulties").³³

Another goal of the study was to assess clinician-reported frenotomy complications by method (scissors/scalpel versus "laser/bovie/electrosurgery"). The researchers found that postoperative bleeding was more strongly associated with scissors/scalpel, but babies treated with laser/ bovie/electrosurgery had four times the odds of "oral aversion." According to Healthline, which defines oral aversion as "sensitivity to—and perhaps even fear of—food or drink taken by mouth,"³⁴ babies with an oral aversion "will refuse both the breast and the bottle," a counterproductive outcome for moms intent on improving the breastfeeding relationship. Oral aversion and repeat frenotomy were the top complications reported.

An Australian physician who works with babies frankly states, "In my opinion, oral laser surgery hurts babies, as does wound stretching."¹³ She describes regularly seeing babies with oral aversion, worsened breastfeeding problems and infections after such surgery. In one instance, she reports seeing "the underbelly of a tongue somewhat separated by a frenotomy that went too deep."

In another electronic survey administered to members of the American Society of Pediatric Otolaryngology, 77 percent of respondents reported a growing number of referrals for frenotomy over the previous five years, especially for breast pain and inability to latch, with 60 percent describing the number of referrals as "too many."³⁵ Three out of five professionals reported having seen frenotomy complications, most often excessive bleeding or frenum reattachment. In another study, fully a

third of children required repeat frenotomy, but 84 percent of patients or guardians nevertheless reported the procedure was beneficial.³⁶ Some providers have found that they can decrease the rate of repeat procedures with a shorter postoperative follow-up period.³⁷

In a study published in 2020 that assessed two years of pediatric data for children under one year old, researchers identified only sixteen cases of frenotomy complications; although this translated to just 1.39 per ten thousand, twelve of the babies required hospitalization, with complications that included poor feeding, respiratory events, pain, bleeding and weight loss.³⁸ In addition, one out of four children had to have the frenotomy repeated.

Another 2020 study reviewed thirty-four case reports of complications from frenotomies performed primarily in the U.S. and Europe, identifying a total of forty-seven major complications.³⁹ With breastfeeding problems being the most common indication for performing the procedure, the parents were rewarded with babies experiencing poor feeding, hypovolemic shock (a life-threatening form of shock involving blood or fluid loss), breathing and airway challenges

NUTRITION FOR NURSING MOMS

While health practitioners often pay some attention (even if dispensing bad advice) to the diet of pregnant women, it is rare for a nursing mom's diet to get much attention. This is a mistake, as breastfeeding mothers and babies need an equally nutrient-dense diet to thrive.

The Weston A. Price Foundation's recommended diet for both pregnant and nursing mothers includes the following:

- · One quart whole milk daily, preferably raw and from pasture-fed cows
- · Four tablespoons butter daily, preferably from pastured cows
- Two tablespoons coconut oil daily
- Two or more eggs daily, preferably from pastured chickens
- Additional egg yolks daily (added to smoothies, salad dressings, scrambled eggs, etc.)
- Fresh beef or lamb daily (consumed with the fat)
- Oily fish or lard daily
- Three to four ounces fresh liver, one to two times per week
- Fresh seafood, two to four times per week (especially wild salmon, shellfish and fish eggs)
- Bone broths (in soups, stews and sauces)
- Soaked whole grains
- Fresh vegetables and fruits
- Lacto-fermented condiments and beverages
- Two teaspoons high-vitamin cod liver oil to supply 20,000 IU vitamin A and 2000 IU vitamin D per day; do not add cod liver oil if the diet is deficient in the important animal foods—liver, egg yolks and meat fats. It is important to follow the diet in its entirety, not just selected parts of it.

The list of foods to avoid includes hydrogenated oils, junk foods, commercial fried foods, sugar, white flour, and soft drinks, as well as substances like caffeine, alcohol, cigarettes and drugs.

and a potentially deadly infection called Ludwig's angina. The researchers hypothesized that neonates might be subject to greater risks than older children or adults.

A 2021 case report from Canada, which acknowledged a "small possibility of complication. . . even in expert hands," described a six-week-old infant who experienced delayed hemorrhage and shock symptoms following laser frenotomy, requiring "fluid resuscitation."⁴⁰ The authors noted that in infants, "postoperative hemorrhage is an important complication to look for as even small amount of bleed may prove fatal, due to low blood volume reserve."

Discussing frenotomy complications in a 2021 interview, a practicing ENT in Texas described complications such as salivary gland cysts ("sialoceles"), staph infections and complications associated with the use of topical anesthetics.⁴¹ The latter include case reports of cardiac toxicity from lidocaine, "because it's just so hard to dose in a little bitty infant, and. . . it's kind of unpredictable." The physician also noted the possibility of a blood disorder called methemoglobinemia (in which too little oxygen is delivered to the cells) associated with "ester-based" anesthetics.

A 2009 study summarizing two hundred forty-two episodes of methemoglobinemia related to anesthetics such as benzocaine and prilocaine noted that a "single spray of benzocaine may induce methemoglobinemia," and that complications of methemoglobinemia include "hypoxic encephalopathy, myocardial infarction, and death."⁴² The authors recommended discontinuing the use of benzocaine altogether and suggested banning prilocaine use in children younger than six months old (the age group often undergoing frenotomy). In a discussion of topical anesthetics for laser frenectomy, a pharmacy website describes lidocaine and tetracaine as the most commonly used products but notes that prilocaine or other "stronger" anesthetics may also be part of the picture.⁴³ The site urges practitioners not to use prilocaine (or similar drugs) in newborns, recommending it only for patients aged two years and older.

As an alternative to anesthetics, Spanish researchers recently reported the analgesic effect of inhaled lavender essential oil for healthy babies undergoing frenotomy, noting lavender's "sedative and antispasmodic properties."⁴⁴ The researchers observed a significant decrease in crying time and lower Neonatal Infant Pain Scale scores in the babies who received the essential oil intervention.

"TO SNIP OR NOT TO SNIP"

Is the "seeming epidemic of moms reporting breastfeeding difficulty" the result of more babies with tongue-tie? Absurdly, some are now making the case for a tongue-tie gene.^{45,46} There is no need to resort to genetic explanations, however, to recognize the fact that a perfect storm of sociological and economic factors is contributing to an "epidemic" of frenotomies.

Australian physican Dr. Pamela Douglas—who believes that most providers have "blindspots" about breastfeeding and a flawed understanding of the "biomechanics of infant suck"—accepts the need for "simple scissors frenotomy" in the minority of infants who she esteems to have "classic tongue-tie" but notes that far too often, families are "frightened into compliance" with laser surgery recommendations by warnings about phantom developmental risks.¹³ In this, pressures toward frenotomy resemble nothing so much as the bullying often endured by new parents about circumcision and vaccination of their babies.

As in these other situations, parents should do their own research, shielded from the din of social media and coercive practitioners. Knowing that "tongue-tie" as a condition lacks definitional clarity,¹³ recognizing that diagnosis "doesn't mean you have to have a surgical procedure,"⁴⁷ being aware that babies can outgrow tongue tightness if left alone⁴⁸ and understanding that many non-surgical forms of support are available can help breastfeeding moms make a fully informed decision about how best to meet their breastfeeding goals.

GALACTAGOGUES

For a variety of reasons, maternal milk supply issues are not uncommon, even when the nursing mother is eating a nutrient-dense Wise Traditions diet. Galactagogues are substances that can help boost milk production.⁵⁰

Although synthetic galactagogues are available, they come with the risk of undesirable side effects such as depression. Instead, women throughout history have turned to foods and herbal substances known for their milk-making properties. One of the most widely known herbal galactagogues is fenugreek (sometimes taken in combination with marshmallow root), although some herbalists caution that its use can be counterproductive if it is not taken consistently.

Others galactagogue herbs include fennel (also helpful for digestive discomfort), milk thistle, blessed thistle (not to be confused with milk thistle), nettle, alfalfa, red raspberry leaf, goat's rue, the Ayurvedic herb shatavari and moringa (not to be used by women trying to conceive), among others.

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Homeopathy Journal HOMEOPATHY FOR GALLBLADDER SUPPORT By Anke Zimmermann, BSc, FCAH

Disclaimer: Homeopathy does not treat conditions or diseases per se but instead treats the individual, in particular the energy field or vital force of the person.

Gallbladder disease refers to any condition that affects the health of the gallbladder. The gallbladder is a small organ in the digestive system located just under the liver. It stores and concentrates the bile made by the liver and sends it to the small intestine via the bile ducts.

Bile (from Latin *bilis*), or gall, is a darkgreen to yellowish-brown fluid produced by the liver of most vertebrates. Bile contains many organic molecules, including bile salts and cholesterol. Bile salts are necessary for the digestion and absorption of fats and fat-soluble vitamins in the small intestines.¹ Bile salts are made from cholesterol and help to regulate cholesterol metabolism. Bile helps to remove many waste products from the body, including bilirubin, a breakdown product of red blood cells.

Gallbladder disease can begin in the gallbladder itself or in the bile ducts connected to it. Any infection or blockage in these ducts has the potential to back up into the gallbladder. Because the bile ducts connect the gallbladder with other organs in our digestive system, gallbladder disease can affect these other organs as well, particularly the liver and pancreas.²

OVERVIEW OF

GALLBLADDER-RELATED CONDITIONS

Conditions that affect the gallbladder include cholecystitis (inflammation), cholelithiasis (gallstones), biliary dyskinesia (problems with bile motility), gangrene (tissue death), gallbladder polyps, cholangiopathy (bile duct disease) and gallbladder cancer.³

Gallstones (cholelithiasis) are the most common cause of gallbladder problems. Gall-

stones can form when bile becomes too concentrated because the cholesterol or bilirubin can't stay dissolved and then starts to form lumps or stones. These may be excreted via the bile ducts if they are small enough or may get stuck in the bile ducts or liver if they get too large. This can cause intense pain, also known as "gallbladder colic," as the flow of bile is blocked. About 10 to 15 percent of the U.S. population has gallstones, and about 25 percent of those individuals need to be treated, usually with surgery.⁴

The form of inflammation known as *cholecystitis* is the most common symptom of gallbladder disease and can be a sign of gallbladder infection or blockage. It is most commonly caused by gallstones but can also rarely be caused by tumors, including cancer. Chronic inflammation can lead to scarring of the gallbladder tissue and potentially gangrene or even rupture of the gallbladder.

Biliary dyskinesia, also known as functional gallbladder disorder, means the bile is not moving well into the bile ducts and can back up into the gallbladder. Symptoms can be similar to those of gallstones, but the problem is caused by smooth muscles or nerves rather than gallstones.

Gangrene of the gallbladder can be a very serious complication of chronic cholecystitis. Dead tissues can rupture or tear, which can lead to infection in the rest of the abdomen.

Gallbladder *polyps* are harmless tumors and growths of the gallbladder. However, large polyps can lead to obstruction and dysfunction of the gallbladder.

Cholangiopathy is any disease of the bile ducts. Chronic cholangitis can cause scarring and narrowing of the bile ducts, which can also cause bile to back up into the gallbladder and liver.

Finally, *cancer* of the gallbladder or bile ducts is rare but serious. Because symptoms of gallbladder cancer often don't appear until the later stages, health care providers tend to treat any potential risk of gallbladder cancer proactively.

SYMPTOMS OF GALLBLADDER PROBLEMS

The most common symptom of gallbladder problems is a sudden pain in the upper-right part of the abdomen. The pain may even extend to the right shoulder area. This usually means that a gallstone is obstructing the bile duct, and the gallbladder is contracting violently to clear the obstruction. The pain can last for several hours and may be triggered by a fatty meal. If the bile cannot be released into the bowel, the person may also develop jaundice as well as light-colored stools.

Chronic inflammation of the gallbladder may cause chronic abdomi-

nal pain, nausea, gas, lack of appetite, abnormal stools, headaches and pain in the eyes.

Rupture of the gallbladder will be accompanied by severe abdominal pain, fever and nausea. In such situations, you should go to the emergency room and will probably need other remedies than the ones discussed below.

Conventional medicine addresses many gallbladder problems with gallbladder removal surgery (cholecystectomy). However, the missing gallbladder then creates other problems for the individual down the line, as there is no longer a gallbladder to efficiently accumulate and concentrate bile for use in helping digest food after meals.

TOP HOMEOPATHIC REMEDIES FOR GALLBLADDER SUPPORT

Because the gallbladder is so closely associated with the liver, many traditional homeopathic remedies for gallbladder symptoms also tend to support normal liver function. Among them are *Chelidonium majus*, *Cholesterinum*, *Lycopodium clavatum*, *Calcarea carbonica*, *Carduus marianus*, *Colocynthis*, and *Pulsatilla nigricans*.

Chelidonium majus, derived from the greater celandine plant, has a long history of use for liver ailments, especially in traditional Chinese and Indian medicine. As a homeopathic remedy, it also has a strong affinity for the liver and gallbladder. Indicators for using *Chelidonium* include upper-right quadrant pain radiation to the right shoulder blade, dark urine and clay-colored stools, nausea and vomiting. It may be indicated for gallbladder complaints during pregnancy. The person may feel better from very hot drinks. A research study published in 2010 used *Chelidonium* in the 30C and 200C potencies to treat rats after experimentally induced liver damage, with positive results.⁶ Another study showed beneficial effects of *Chelidonium* 200C for experimentally induced liver cancer.⁷⁻⁹

Cholesterinum is a homeopathic remedy made from cholesterol. As already noted, bile salts are made from cholesterol, and many gallstones are the result of bile that becomes too concentrated, causing crystal formation. Homeopathic cholesterol may be used to help redissolve those stones and normalize the cholesterol metabolism. A low potency like 6X may be helpful if taken once a day over several weeks (but check with a qualified homeopathic practitioner, of course). In animal research, *Cholesterinum* has also demonstrated potent liver-protective effects fol-

lowing experimental induction of liver cancer.¹⁰

Lycopodium clavatum may be indicated if there are gallbladder symptoms accompanied by gastric symptoms like acidity, and abdominal bloating and gas. The sufferer may develop gas after even just a few bites of food. The gas may rumble around in the abdomen and pass with difficulty. There may also be a strong craving for sweets and hot drinks. A history of strong embarrassment may set off a *Lycopodium* state. As with the other remedies already mentioned, there is some interesting research on the liverprotective properties of *Lycopodium* as well.¹¹⁻¹³

Calcarea carbonica, a remedy made from the soft, inner layer of oyster shells, can be another common remedy for gallbladder symptoms, especially if accompanied with sour belching and sour vomiting. It may be indicated as a constitutional remedy if the sufferer is obese with a flabby and soft constitution but good willpower. The person may crave sweets, eggs and starchy foods like pasta and bread, may perspire a lot on the head and may be sensitive to cold air.

Carduus marianus is a homeopathic remedy derived from the milk thistle plant. Milk thistle is another plant with a long history of use for both liver and gallbladder ailments. Homeopathically, it is used in a similar way and may be helpful for chronic inflammation of the gallbladder and congestion of the liver. Indicators may include pain in the right upper abdomen in the gallbladder region, accompanied by nausea and vomiting of acidic and burning fluids. Jaundice may be present. It may also be indicated for beer drinkers.

Colocynthis, a remedy made from a plant

HOMEOPATHY FOR THE GALLBLADDER

CHELIDONIUM MAJUS: Upper-right quadrant pain radiation to the right shoulder blade.

CHOLESTERINUM: May aid in dissolving gallstones and support cholesterol metabolism.

LYCOPODIUM CLAVATUM: Gallbladder problems with excessive, trapped abdominal gas; gas after a few bites of food. CALCAREA CARBONICA: Gallbladder problems with sour vomiting; gallbladder problems in obese, flabby individuals. CARDUUS MARIANUS: Chronic inflammation of gallbladder; upper abdominal pain; beer drinkers.

COLOCYNTHIS: Severe, cutting pain with gallbladder colic; doubling over in pain; possibly triggered by strong emotions. PULSATILLA NIGRICANS: After rich, fatty foods, restaurant foods, cream. known as bitter cucumber, may be a very useful remedy for symptoms of acute gallbladder colic with intense cutting and shooting pains that are relieved somewhat by applying pressure. The sufferer may be writhing in agony or doubled up in pain. Intense anger, indignation or even grief may have triggered an attack.

Finally, *Pulsatilla nigricans* may be indicated if gallbladder symptoms come on after eating out in restaurants, which often use lowerquality fats. Fatty foods in general can trigger gallbladder symptoms, but with *Pulsatilla*, it's almost specific to restaurant and deep-fried foods and, to a lesser extent, overconsumption of butter or cream.

TRY HOMEOPATHY FIRST

There are many other homeopathic remedies that may be indicated for gallbladder support and for the relief of gallbladder symptoms. As always in homeopathy, it is not the disease that is being treated but the unique individual. That being said, some of the above remedies may help to prevent many gallbladder removals!

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The Wise Traditions Pantry

GOING WITH THE GRAIN By John Moody

Of the many traditional tools needed to prepare food, few have changed as much over time as the grain mill. What once stood lofty and tall—and by necessity close to a community waterway or similar natural power source—can now sit on your kitchen counter! To achieve that magical conversion from grain to flour, a long trek with a bag of wheat has been replaced by a short walk and the flip of a switch.

Our household has been using whole grains, traditionally prepared, for almost twenty years, thanks to the wisdom shared by the Weston A. Price Foundation. And one of our earliest large purchases as a family was a grain mill (also sometimes referred to as a flour mill). Over the years, we have tried an array of grain mill options—some powered by hand, some electric and some with other interesting options! So, let's explore the major grain mill options currently on the market to help you make a better decision if you decide to go with the grain.

AN UP-FRONT INVESTMENT WITH LONG-TERM BENEFITS

I won't recount in-depth all the reasons why you should consider owning a grain mill, but a brief review is always worthwhile.

First, a grain mill lets you create truly fresh, nourishing flour.¹ Grains, once broken down into flour, begin to degrade. Light and oxygen cause oils to oxidize (and turn rancid) and other nutrients to break down. Significant amounts of nutrients—up to 90 percent—can be lost within just a few days of milling.²

Second is the issue of storage. Flour is not the storage form of grains—whole grains are! Whereas flour is hard to store without loss of quality, whole grains are relatively easy to store for many years.

Third is the matter of cost. Whole grains

are substantially cheaper than flours. You can often save 30 to 60 percent off the price of flour if you purchase whole grains in bulk (usually twenty-five-pound or fifty-pound bags).³

What is the biggest drawback to whole grains? They need to be milled.

A HANDMILL'S TALE

There are three major types of mills on the market. The first are mill attachments that work with other kitchen equipment you may already have on hand. Other types of mills are either stand-alone or multiuse units.

The price of grain mills runs the gamut. If you already own an existing piece of compatible kitchen equipment, such as a mixer, you can spend as little as one hundred to two hundred dollars for an attachment-style mill. Stand-alone models range from smaller models generally costing under six hundred dollars, to larger models that can easily cost in the four digits but—if you care for them properly—will still be making flour for your great-grandkids.

ATTACHMENT MILL OPTIONS

Before discussing attachment options, it is important to note a few things. First, most attachments we have tried will usually take two passes to create a truly fine-quality flour (though this can also be the case with a number of stand-alone mills as well). Second, if your machine has relatively low power, milling can cause significant strain to the motor and other components. This can easily result in reducing the life of the machine or its motor. So, if you plan to go with an attachment, make sure whatever you are attaching to is up to the task.

If you own a KitchenAid, there are a halfdozen or possibly more milling attachments now available. But not all KitchenAids are equally A grain mill lets you create truly fresh, nourishing flour. powerful. In our experience, unless you have a heavy-duty KitchenAid model or only need to mill occasionally, it is probably best to consider a stand-alone unit.

Other common kitchen machines that can take milling attachments include the full-size Bosch mixer, the Family Grain Mill attachment (which fits most mixers or a stand-alone hand base) and Mockmill's grain mill attachment.

If you have a high-quality blender, another option is the "Blender Batter" method popularized (and possibly invented) by Sue Gregg, in which whole grains and other ingredients are processed and soaked in a blender.^{4,5} While this won't work for breads, it is an excellent option for properly preparing muffins, pancakes, waffles and a wide variety of other whole-grain creations. We used this approach early in our marriage when we started learning about traditional foods and their proper preparation; the money saved eventually allowed us to purchase our first grain mill.

COUNTERTOP GRAIN MILLS

Twenty years ago, when we first started working with whole grains and the equipment to prepare them, everything was plastic, white plastic. Since then, one of the major changes in the grain mill market is that manufacturers are now making many products with more natural materials. The Mockmill stone mill (engineered and manufactured in Germany) and the KoMo mill (handmade in Austria of beechwood or walnut) are especially noteworthy for their use of natural materials that make their mills far more aesthetically enjoyable to have sitting on your counter.

When it comes to countertop grain mills, the main divide is *size* (and thus also cost). Generally, small electric countertop models run three hundred to six hundred dollars. Larger models can run five hundred dollars and up. Larger models are usually faster and have larger hoppers for feeding into the mill, but otherwise they don't differ much from their smaller counterparts.

Some of the smaller setups are single-purpose—meaning that you can use them for milling grains, but not much else. And while their overall speed ranges, hopper sizes and fineness of the flour produced do differ some from brand to brand, generally, these differences are not significant. In other words, in most categories, these mills will be fairly similar. Moreover, some of the variations described in product reviews may have to do with different qualities or types of grains. Small reported variations from mill to mill could also be related to the need for the owner to adjust the mill more carefully.

There is one area, however, where all grain mills are not created equal—noise! One of our earlier mills (the K-Tec, now known as the Blendtec) was so loud that standing behind a jet engine during take-off would have been more bearable. The KoMo mills, in contrast, are noted for their especially quiet performance. If you are in an apartment or otherwise need to limit noise levels, make sure that whatever brand you buy checks this box.

A second major difference among countertop models has to do with what they can mill. The German-made Family Grain Mill will only handle traditional grains and does not perform well with harder fare such as corn or beans. The KoMo, on the other hand, will handle just about any grain, pulse or bean and will even do non-oily herbs and spices. So, depending



RECOMMENDED BRANDS OF GRAIN MILLS

on what you hope to do with your mill, make sure you review what the company says their mill can do.

A few models—especially the Family Grain Mill—also have the ability to swap attachments and perform a number of other tasks. This is one reason we went with the Family Grain Mill, which served us well for over a decade. We especially enjoyed the flaker/roller attachment for oats and other grains and seeds.

GRAIN MILLS TO LAST A LIFETIME

The key variable that sets the smaller countertop grain mills apart from larger ones is longevity. Other than needing to replace milling heads or other minor components occasionally, many if not all large grain mills are made to last at least a lifetime, if not many lifetimes!

While there are several more on the market, the three we have experience with are the Retsel "slow turning mill," the GrainMaker and the Country Living Grain Mill, all American-made. For the latter two, the base models are not motorized; however, both not only have motor kits available but also have bicycle kits available to let you power them and get some peddle time in! If you are handy, you can also motorize them yourself—there are many guides online explaining how to do so.

It should be noted that these mills are quite heavy and take up a large amount of space. The Retsel also isn't the prettiest, whereas the other two—if space allows—could sit out in the kitchen or another space instead of requiring set up and then stowage with each use.

WHICH MILL IS BEST FOR YOU?

Over the years, we have owned a Retsel, K-Tec/Blendtec, Family Grain Mill and Mockmill, and our current mill is a GrainMaker. We also have worked with a number of the other models. Our conclusion is that there is no "one best" grain mill. If your budget allows and you are looking for a mill that will last many decades, the GrainMaker or the Country Living Grain Mill are worth considering. If you are limited on space or budget, the Mockmill or another countertop mill called the NutriMill might fit your size and budget constraints.

It is also not uncommon to find good mills for sale used. There are always people who think they will get into working with whole grains and sourdough but end up not doing so or doing so only for a season. You can save a few hundred dollars by keeping an eye out for such bargains. \bigcirc

John Moody is a Kentucky farmer, researcher and author. His most recent books, The Elderberry Book and Winning the War Against Weeds, are available at johnwmoody.com.

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Wise Traditions Podcast Interviews INTERVIEW WITH VICTOR COZZETTO CLAY: ANCIENT EARTH MEDICINE



Hilda Labrada Gore is the producer and host of our Wise Traditions podcast and a Washington, DC, co-chapter leader. An enthusiastic communicator, Hilda is passionate about wellness on every level, which is why she is known as "Holistic Hilda." She is a speaker, podcast consultant and the co-author of Podcasting Made Simple. Hilda lives in Washington, DC, with her husband, children, dog and cat. Subscribe to her blog through her website (holistichilda.com) and follow her on Instagram: @holistichilda.

HILDA LABRADA GORE: Many of us know about the benefits of clay masks and even clay baths for the health of our skin, but did you know that clay can gently detox us on the inside of our bodies as well? Victor Cozzetto, a nutritionist and certified emotion code practitioner with a focus on holistic wellness, has fine-tuned the use of a number of tools to heal the gut and mind through detoxification. Victor explains that clay is much more than dirt. Clay's special structure works to help rebalance our body's own electric frequencies. Victor also goes over clay's many detoxing properties along with the fact that clay can nourish the body with trace minerals and electrolytes. In short, clay is a truly ancient earth medicine. Victor, let's start with your own first experience with clay.

VICTOR COZZETTO: I had learned about clay through studying shamanism. In my first physical experience—meaning beyond research—I used clay internally to help me with constipation. This was before I drank kefir, which perfected my bowel movements. Many people don't realize that clay can be used for constipation or diarrhea. My mother had great success with it to stop diarrhea.

HG: I had heard that it would help if you had diarrhea, but not if you have constipation—but you are saying it works for either symptom?

VC: Yes. Most people imagine that clay dries us out. Even when people use it topically, they imagine, "It's tightening my skin. It's drying everything," but that's not exactly what's going on. There's much more going on with clay.

HG: Since you've done extensive research, help us enter into "Clay 101." Help us understand what some of its properties are and what it does for our health. VC: A lot of people think of clay as dirt—it comes from the earth. But it's different than dirt, soil or sand. It is formed from volcanic activity. It's more closely related to a quartz crystal, which you don't often hear about. You might hear people talk about it as an aluminum silicate, but it has a very special structure. It contains a lot of different minerals and elements.

There are many kinds of clay. When I'm speaking about clay, I'm talking about bentonite clay. That's what I mostly use. But there are so many great clays all over the world-there's no prejudice here. Everyone has access to clay. When you were in Australia, you probably stumbled across people talking about clay that they have there. If you go to Africa, South America, Europe, or the U.S., it is the same. Bentonite clay is what you usually see being sold everywhere. It comes from volcanic activity on the earth, and it has a very special structure. It gives us minerals like magnesium, potassium and calcium. It will give you minerals or electrolytes. I think your audience is very familiar with the idea of electrolytes and how important minerals are in that sense. They help us electrically.

The way clay does this is when it comes into our body or even topically, the clay structure itself has a very strong negative charge, so it holds onto positive ions. For example, things like magnesium, calcium, and potassium—the clay will be holding that. When it comes into your body and toxins are present—like lead, mercury, and so on—the clay prefers those because they have a stronger positive charge. It does what we call a "cationic exchange." It swaps out. It's like, "I want that mercury ion, so I'm going to give your body a magnesium ion instead." It's cool. We have this twofold benefit because we get rid of a toxin and get a mineral.

HG: Is this why some people call clay a binder? It holds onto the toxin, chemical or element that we don't want in the body and escorts it out? VC: Yes. It gets carried out. The word "binding" is a pretty good word. It's a neutral word. A lot of people are familiar with the idea of chelation. If you get in a trauma situation or get poisoned, you're going to go to the hospital. You will be given some very powerful chelation agent to suck up the poison as fast as possible. Clay is not a chelator because in chelation, when it grabs a toxin, it creates a new compound that is often toxic—but less toxic. The detox system in our body works this way. We go through different stages where we reduce the toxins step by step and then get them out. In most of what's going on with clay, it does this cationic exchange. It's like a magnet. It can be a lot gentler for detoxing.

HG: I wonder who first thought of it for internal use. I would equate clay or the use of clay as a topical application. I could picture it for my face, or if I had a rash on my arm. I wouldn't think of ingesting it. I wonder when that practice began. Do you have any idea?

VC: It would be impossible to trace perfectly because the animals were doing it before us. There are thousands of years of history that we do know of. One of the nefarious motivations was royalty trying to protect themselves from poisoning. They would take clay with all their meals. In every culture, we'll see that. You'll see, for example, in the animal kingdom I believe it's one of the tropical birds that first consumes clay so it can then go consume a certain type of berry that would be toxic to it. It's a seasonal thing that it does. It's quite amazing because we see different animals use clay; even elephants will have their favorite places to go for clay. They'll prefer one area over another.

HG: That conjures up nice memories for me of when I went to Kenya and Zimbabwe. I was able to see some elephants dust bathing. They must have known exactly what they needed and gone to the right clay hole.

VC: Animals seem to know much more than us instinctively and probably through some trial and error also. That's the way we learn.

HG: Don't pregnant women sometimes get a craving for clay or dirt? Don't they call that condition pica? VC: That's interesting. I haven't heard that in a very long time. Women's intuition seems to be at a peak during pregnancy. They get cravings for things that the body knows it needs. Clay is fantastic during that time. There's another thing women do. Especially for the first pregnancy, they will tend to dump a lot of their toxins into the first child. It is good if we can prevent some of that. The mother is also dumping everything else to assist the child from her own body.

HG: We want to return to this instinctive use of clay. I'm happy to report in the circles I run in, that this whole pandemic time has made people think, "What is more natural? What am I going to turn to, to shore up my body's health?" A lot of people do see the benefits of the earth itself, and that's where clay comes from.

VC: I love to talk about the idea that the earth itself gives us so many things to help us heal. There are many types of clay, and they can be used in combination. I'll even use a combination of three different clays. The earth is amazing. Weston Price even noticed it and wrote a little bit about clay that he observed being used. The earth provides for us if we know where to look. For me, it has come to the forefront these last couple of years. From my perspective, every problem is a result of malnutrition and toxicity. Clay is hitting both of those things. It's giving us a bit of nourishment. It's not food, but because of the way it works with the mechanism of cationic exchange, it's giving us a tiny bit of good minerals while it's grabbing the toxins.



ISE HABLA ESPAÑOL!

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- Tradiciones Sabias: Our Spanish podcast is currently in its second season! Find it on our website or on your favorite podcast app. Episodes cover topics like "En Favor De La Carne" ("In Favor of Meat") and "El Suelo Nos Sana" ("The Earth Heals").
- WAPF en Español: Our website has an entire section filled with articles, trifold brochures, videos and more—all in Spanish! Visit it here: https://www.westonaprice.org/espanol/
- Social media: We are on Instagram (@westonaprice_espanol) and Facebook (wapfenespanol).

If you don't speak Spanish, that's okay. Just share these resources when you can with those who do! iY gracias de antemano!

From my perspective, everything is a result of malnutrition and toxicity. Clay is hitting both of those things. HG: It surprised me when you said it grabs the mercury and leaves magnesium in its place.

VC: I'm not suggesting that we can resolve our nutrient deficiencies by consuming clay. We want to follow a Weston Price diet to the best of our ability, but clay certainly does help us to augment that a little bit. Some people in the Wise Traditions community use clay even when cooking. They put a little clay in their bread. This is to help clean the food before we're even consuming it.

It's got a long history. For example, pottery-we used clay pots. Clay has been in use for a long time and for more than just its convenience. We were very aware of its detox properties, but I could also say medicinal. We know about the healing waters and other things. Clay baths are the same thing because you can absorb a lot of minerals topically, like magnesium.

HG: That's exactly where I wanted to go next. What conditions do people have that you would suggest using clay to help restore their health?

VC: There is a very long list. Let me start with the most obvious. People use it topically for facials or over their whole body. An interesting thing to relate back to how we opened this is the idea of hydration or drying out. At first, you're hydrating clay. Clay has a very special

relationship with water, so it will help to hydrate your skin. It's tightening and pulling, but it's not drying it out. Your skin feels wonderful and rejuvenated after you've worn a clay mask. This same idea happens when you take clay internally. Although when we do it internally, we prepare it differently. We're hydrating it in a one hundred to one ratio with water. You're drinking water with some clay in it. The idea of hydrating the clay first is very important.

Internally, if I jump to the opposite end of the spectrum, let's go to the extreme examples where I've got people who have had their ileum removed-part of their intestines removed-or have had a gallbladder removed. These people might have issues with what we call bile acid diarrhea (BAD), bile acid malabsorption (BAM), irritable bowel syndrome (IBS) or irritable bowel disease (IBD). These people have diarrhea that they cannot stop. Clay is as good as any medication we have for helping these people because it's very good at absorbing excess bile acids. It's fantastic for this. A lot of my clients are in these extreme states of unwellness where they've had surgical procedures. Clay can be a great help for that and then everything in between.

HG: It sounds so wonderful. I've interviewed people who talk about how the earth has healing crystals or stones and that they can help mitigate



58. Fundamental Health with Paul... Paul Saladino, MD



59. Chasing Life CNN







64. Be Well By Kelly



65. Dr. Joseph



66. TED Health



AN EDUCATIONAL TOOL

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the non-native electromagnetic frequencies that we're exposed to. Man creates artificial frequencies that are damaging to the body, and the earth offers natural healing frequencies that are good for us. In this way, the story of clay resonates with me.

VC: I'm so glad that you mentioned that. We have not discussed the extremely complex electromagnetic properties of clay. You led into a wonderful hornet's nest in a way. Clay has very complex special electromagnetic properties because of its relationship with water. For example, there are topical uses of clay where you would put a poultice, you would make a magma, you would put almost an inch thick layer of clay over a wounded area, a fractured bone, over your kidneys, or your liver and such. It goes beyond just this topical absorption because you've got an electromagnetic field that's created by that clay poultice that is now acting on your body.

Related to this, there are natural frequencies. The idea with crystals is the structure of a crystal lattice—the size is resonating or similar, in line, or in tune with frequencies that are good for us. That's how you can start to relate these things when you talk about crystals or anything that is working with a crystalline structure. You start talking about sound healing, vibrational healing, etc. If you search for clay as a transducer, it is this idea of clay converting one form of energy to another. This is related to crystals.

We can go in a lot of different directions here. I mentioned topically, but also internally, clay will help to detox radiation. It will shield you; it will grab radioactive cesium in your body and shield you from it until it carries it out of your body. There's a lot going on. It's very complex.

HG: You said there are different types. I was surprised when you said you'll take three different types sometimes. What are you doing and why?

VC: I mentioned the bentonite clay. Bentonite clay is probably the most common in the world. One way of looking at it technically is it's a triple-layer clay. Clay forms layers. When I drink it internally, let's say I have a half teaspoon of clay in a glass of water and drink that. That clay is going to spread out and coat most of my intestines. It's going to help protect my intestines, help them to heal and absorb all of the different things that are going on.

The two most common types of clay within bentonite are calcium bentonite clay and sodium bentonite clay. This has to do with the ratio of calcium and sodium that are in the clay. There are still many other things. There's going to be magnesium, potassium, many other elements there. But in this case, when they're using this nomenclature, they're talking about when that clay was formed-formed by volcanoes, eons and eons ago-the calcium or sodium became a large component of its structure. For internal use, we usually use a calcium-based clay. It tends to be a little gentler because it doesn't swell. You may hear this idea of swelling or expanding in size; a sodium bentonite clay will expand or swell in size.

This is just the bentonite. There are other clays, like illite clay—a dual-layer clay. There are many other types. Even if you're just talking about bentonite clay, it's going to be a little bit

the impact the podcast is having. I've be

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FROM THE HORSE'S MOUTH

Here are examples of

Always uplifting! ★★★★★ by Tigerboii – Jun 13, 2021

Can't stop listening. ★★★★ by SLH1985 – Jun 15, 2021

and spreading the info you do!

I've been subscribed for the last year and have felt absolutely nurtured by this podcast. In a time of growth & perseverance I am in awe of how well-balanced and supportive this podcast is. Go somewhere else if you want to be told what to do- this podcast encourages you to make changes while enabling you with excellent information straight from the source of knowledge and experience.

I look forward to each episode and often forward the link to episodes to friends and family! Thank you for all you do

Karen Downey ★★★★★ by KarenAnn1968 – Jun 9, 2021

I am obsessed with this podcast! I am an ER nurse and I have struggled during the last year in the culture of illness hat has been created. I feel like the medical community is doing more harm than good sometimes and it's so hard to be a part of that when I really want to help my patients release fear, breathe and embrace their innate ability to heal. It's refreshing to hear words of wisdom about health and nutrition and I have been implementing various things into my life and sharing episodes with others. It also helps me to take care of myself so I can better serve my patients and share bits of advice with them. I also just ordered from ancestral supplements! Can't wait to get started! God bless you all-Karen Downey

Our ancestors for thousands of years and the creatures around us have been showing us how magnificent clay is. different all over the world because there were different volcanic activities that incorporated some different minerals. Those different clays will have different affinities for different toxins. One clay might grab lead more aggressively, and another clay might grab mercury more aggressively. That's where the differences come in. They'll also get rid of parasites and mycotoxins. If you're familiar with the huge broad spectrum of toxins that unfortunately we are ingesting through the air and our food, clay will grab onto a lot of them. The difference in the various clays is what their preferred "diet" is or what their affinity is for the different toxins.

You want a fine clay so that it hydrates easily. I don't have any very specific recommendations because there's great clay all over the world, but I usually tell my clients, "You can get it pretty cheap." Redmond Clay has been used for a long time. It's a very nice clay. It's in the middle, an almost fifty-fifty sodium and calcium "blend." I don't want to use the word "blend," though, because it sounds like it was manufactured, and it was not.

HG: I remember when I traveled to Israel, I purchased some clay from the Dead Sea. I imagine what the earth has to offer us is so healing. Even if we're not quite sure which toxins we're trying to extricate or necessarily what we're trying to resolve in terms of a skin problem, it seems like the earth would know what we need.

VC: I try to tell my clients to use their intuition. Experiment a little. See how things feel. Adjust dosages. Adjust even the types of clay that you use. The earth provides so much. It's amazing.

HG: For any skeptics out there, think about the health of the kid who is putting his hand in his mouth or crawling in the dirt. The kids on farms are often healthier than kids in cities, and it may have to do with their very contact with the earth.

VC: Absolutely. I believe that 100 percent. The more dirt the kids get in their mouths and the more they have their hands and feet in the dirt, the healthier they're going to be. There are so many benefits. There are many experts on clay around the world, but even they cannot say that they understand clay 100 percent. This is something that all of us often forget. We want to imagine that we understand very deeply—like it is going to give us comfort—but we're still woefully ignorant. We're still infants. We're going to continue to learn so much, but our ancestors for thousands of years and the creatures around us have been showing us how magnificent clay is. You mentioned earlier how pregnant women will crave clay sometimes. This shows you the power of intuition or instinct.

HG: I am trying to earth more. By that, I mean I'm putting my bare feet on the ground because I know, like the clay, the earth has negative ions that my body needs to absorb. I can offload the positive charge my body has from all of the EMFs and other toxins in my body. I'm giving it what's a burden to me, and I'm taking on the good stuff it has to offer.

VC: Our bodies are a battery. The clay is also helping with the electrical health of our body. It works synergistically with all of that. It's so true. We have to take a holistic perspective. The more holistic we are, the better understanding we have. Instead of viewing the clay as this mechanical thing that is just grabbing toxins, when we take a more holistic perspective, we realize, "The clay is also helping me hydrate. It's nourishing me, absorbing radiation and giving me a type of electromagnetic shield in my gut." The more we learn, the more holistic we become. The more we open our minds, the more we are able to understand and appreciate what all of these different things do for us.

HG: You've made clay sound so wonderful. It must have some drawbacks. Does it?

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VC: The biggest drawback is understanding how to use it, and this applies to a lot of things. People abuse things. Let me give an example of activated charcoal, which is another wonderful thing from the earth. That's great for food poisoning. You can carry capsules of activated charcoal in your bag. It's very convenient; if you get food poisoning, you swallow that. Clay is not to be used that way. Clay really needs to be hydrated because it has a very important relationship with water. For example, I tell my clients, "Take a teaspoon of clay and put it in two cups of water in a glass jar"-you don't put it in metal or plastic where it's going to absorb toxins. You put it in a glass jar and shake that up really well. You let that sit overnight or at least let it hydrate for a few hours, so you avoid any potentially negative things. You want the clay to be good and hydrated, and then you can drink it.

In addition, understand where to get good clay. Most of it is good. The animals are out there running around in the world, but we do need to be more careful because we are in an ever-increasingly toxic world, unfortunately. You want to make sure you've got a good clean clay, something that's reputable, and then you want to make sure you're not putting it in plastic containers, metal containers, or even using metal spoons. You're going to use glass, wood, or things that are inert.

So, you want to make sure it's hydrated and then, when taking it, don't just jump in and guzzle two glasses at once. Drink a little bit and see how you feel. Work with your body. Learn to listen to your own body. Yes, there are pitfalls like anything else; you could die from water poisoning if you drink too much water. It's a matter of having the knowledge. I have a one-page guide that lays it out to make it easy for people.

HG: You've given us a lot of information about what clay can do for us, how to get started with it, and the pitfalls if we don't take it carefully in other words, finding a good source of clay and knowing how to take it—but is there anyone for whom clay might not be beneficial?

VC: There is something that you have to be a little careful with. If you are taking a lot of medication, you've got to keep clay away from the medication time because it can interfere with certain medications. Most medication is highly toxic, and the clay is going to grab that. It does not happen with all medications, but if you are dependent on certain things, you're going to want to make sure that the clay is not interfering.

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with water.

needs to be

Usually, this is very easy because in most cases, keeping things a couple of hours apart makes it no problem, but it is something that you're going to want to look into. You're going to want to speak to your doctor or whoever your health care practitioner is. You can also do your own research. That's the biggest thing. I work with people that have had parts of their digestive system removed, and they're using clay. If you've had kidney failure, for example, you might want to be careful before you jump into clay. There are certain extreme conditions. If you've got extreme dependencies on medication, you want to be careful. Don't just dive in blindly.

HG: That's a good point. It surprised me when you said to wait a couple of hours and then you might be okay from when you take your pharmaceutical drug to when you take the clay because I thought clay could grab anything. In other words, it doesn't have to be something new in the bloodstream or in your system. I was hoping it could grab toxins that have "settled" in different parts of the body. Do you think it will go that far?

VC: Yes. You lead to another very cool insight. The reason why two hours is usually okay is that the drugs will get in and will have gotten to where they need to go. They are doing their thing and they're out of the bloodstream. While the clay does not go into your bloodstream, it will do some detoxification of your blood. The intestines are extremely thin. They're being nourished by blood. The clay can pull some toxins through the walls, so to speak. It does not work for everything-that's why we use other detox agents-but it can pull some things out of the blood. The idea is to take your meds and make sure your meds have already gotten to where they need to go. If you've consumed the medications internally, they've gotten absorbed into the bloodstream and been delivered

to wherever they're supposed to be delivered to, and then you're okay to take your clay.

HG: Is clay recommended as a long-term protocol? Are you going to take clay for the rest of your life?

VC: This is the beauty of clay. It's one of the things that you can use forever, but there's not a set thing. For example, you have a serious issue and then you start taking clay. You could go up to taking three tablespoons a day if you're using this as a heavy-duty protocol for some specific issue, but you wouldn't stay on such protocol. There are some protocols that are short-term.

For myself, I will prepare my clay and take maybe two or three sips of clay in the morning or at night, depending on what's going on. If I had a crazy meal and then I want to make sure I'm going to be okay and give myself a little protection, I'll take a few sips of the clay. I can do that forever. I can do it every day if I want; I can keep it as a shield. Just monitor yourself. See how your bowel movement is. If your bowel movement remains perfect, there's no need to stop. If you feel good, keep doing what you're doing. Also trust your intuition.

HG: Dr. Tommy John says "N equals one." In other words, study how things work for you. Observe how your body is reacting to things and what it wants. You are unique, and you know your body better than anyone else. It is good to turn to folks for some guidance, but that doesn't mean that you can't listen to see what the body might be trying to tell you and how it's responding.

VC: I like to tell my clients, "Let's assume I'm the smartest guy on the planet and I have all knowledge that's ever been available to humans. I still can't give you better answers than your intuition can because I'm not you." If we learn to tap into that, intuition is beyond any intellectual power because we change day by day. I agree with you completely. We have to learn about our own bodies. We have to be willing to listen to them and then work, adjust and adapt. We're not the same person from one moment to the next. For example, if we had an ailment one moment and then it's not there anymore, then we adjust.

Clay is nice because it is something that you can keep in your system, in your routine—or at least keep it in your medicine cabinet. I always have it on hand.

HG: I bet our ancestors who lived this Wise Traditions lifestyle might not have even needed as much clay because they were in contact with the earth. We are living in such sterile environments, in these little boxes, so we need to reconnect with the earth, one way or another.

VC: I've got clients who had more specific needs for clay topically and internally because of concerns about heavy metal toxicity from various sources and other toxicity.

You're right. The whole idea of using it is that it connects you more

to the earth. You feel more self-empowered when you use these natural things. Clay is cheap. This is another good benefit. It's probably one of the most cost-effective things that we can add to our diet.

HG: I appreciate this. This "Clay 101" class has blessed me, and I'm sure it's going to bless the reader. I do want to ask you one last question, the one I like to pose at the end. If the reader could only do one thing to improve their health, what would you recommend that they do?

VC: Since this interview is about clay, I would have to say to start experimenting with clay. Get it into your routine or at least get it into your medicine cabinet. Get a little bottle of Redmond Clay. Start playing with it topically or internally and see how you feel. Allow yourself to get comfortable with the idea because it's such a powerful, flexible thing. You can use it for bug bites, wounds and so many different things. It's pretty fun to play with, but I mean, play with it for your health.

This was Wise Traditions podcast 372.

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Glow Kids: How Screen Addiction Is Hijacking Our Kids—and How to Break the Trance By Nicholas Kardaras, PhD St. Martin's Press

The image on the cover of Glow Kids is hauntingly familiar-a child's face transfixed and illuminated by a blue screen. If you want to better understand the addiction to glowing devices that plagues children-and adults-across the nation, this book-written in a conversational tone-is a great resource. If you prefer to focus on what you can do to heal yourself or others, you can skip to the final chapter and try some of Dr. Nicholas Kardaras's suggested solutions. His recommended protocols to treat digital addiction include a full digital detox (avoiding computers, smartphones, tablets and television for four to six weeks to reset habits), introducing new activities and hobbies, connecting with other people and immersing yourself in nature.

Written in 2016, *Glow Kids* demonstrates the impact of screen addiction on children through the author's clinical work, research and media insights. An addiction expert, Kardaras weaves together firsthand accounts and studies to convey the neurological, psychological, biological and behavioral effects of these technologies on young people. Kardaras describes many specific encounters and conversations, such as sitting in an office with a boy named "Dan" who was so addicted to an online fantasy game that he became unresponsive, frightened and disconnected from his body.



In the first chapter, Kardaras documents how screens-and video games, in particularare designed to manipulate the neural-hormonal network and result in addictive adrenal arousal, often leading to more serious conditions like Game Transfer Phenomena (see Ortiz de Gotari AB and Griffiths MD, "Game Transfer Phenomena and its associated factors: an explanatory empirical online survey study," Comput Human Behav, 2015;51:195-202), which is what "Dan" experienced, or Internet-related psychosis (see Nitzan U, et al., "Internet-related psychosis-a sign of the times," Isr J Psychiatry Relat Sci, 2011;48:207-211). Kardaras goes on to explain how screens trigger dopamine-activating responses that are just as arousing and addictive as sexual activity and drugs. In another chapter, Kardaras writes about the dangers of radiation emitted by phones and screens, including the fact that EMF exposure above two mG (milligauss) harms biological organisms; a typical

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 notebook or coil binding.

Kardaras does a deep dive into the money behind education technology and what he labels as the "screenobsessed Educational Industrial Complex."

computer measures at two to five mG at three feet away, and four to twenty mG at four inches and closer.

Throughout the book, Kardaras references and breaks down research studies to support his points, including using Dr. Bruce Alexander's "Rat Park" addiction experiments to explain why not everyone develops addiction when exposed to the same substance. In the late 1970s, Alexander did an experiment that provided the same drug-laced water to two separate groups of rats and found that only rats isolated alone in cages became addicts. Rats with access to "Rat Park," a large open area filled with other rats and possible activities, barely touched the drugged water. Kardaras suggests we consider children's screen addiction in the context of Alexander's conclusion that addiction is more likely in "our hyperindividualistic, hypercompetitive, frantic, crisis-ridden society [that] makes most people feel socially and culturally isolated." Kardaras lays out how isolation not only can lead to addiction but to insanity, referencing a six-week human experiment carried out at McGill University in the 1950s, which was cut short when the subjects in isolation began to experience psychosis.

Unfortunately, the large amount of evidence that electronic devices are harmful to children has not stopped the drive to force them into the hands of millions of young Americans. Kardaras does a deep dive into the money behind education technology and what he labels as the "screen-obsessed Educational Industrial Complex." He describes how school officials and tech advocates have pushed technology as a "necessary" civil right, with no proof but lots of profit. In 2014, the Los Angeles Unified School District had a plan to purchase over one billion dollars' worth of iPads from Apple with Pearson educational software for every student in the district. While that plan failed and resulted in an FBI investigation, school districts across the nation have followed suit by purchasing

and distributing devices to students despite the correlation between these technologies and aggressive behavior or those labeled as attentiondeficit/hyperactivity disorder (ADHD).

Kardaras also writes about the desensitizing effect of exposure to violent imagery, devoting two chapters ("Ripped from the Headlines: Real Cases of Video Game-Influenced Violence" and "The Newton Massacre: Video Game Psychosis") to true, heartbreaking stories of gruesome violence resulting from video game addiction. One of the incidents took place after parents had taken away their son's "Halo 3," a violent "firstperson shooter" video game that, as of 2014, had sold over sixty million units and grossed over three billion dollars for Microsoft.

As I read these heavy chapters and the recent headlines about another tragedy in Texas, I couldn't help but recall what Tommy John said during his January 2022 interview on the Wise Traditions Podcast (episode #347): "We really are experts in some really bad things." Kardaras calls himself "one of the world's foremost addiction experts." Do we really want to be experts on the negative impact of technology, or would we rather be experts on the positive impact of nourishing food for mental health? If you're reading this journal, I'd imagine you agree that what we need right now are experts in food, farming and the healing arts with skills that will serve human beings in the long-term. While I would recommend this book based on its readability and research, I would rather give a thumbs up for the work of the Weston A. Price Foundation to ensure that our kids are glowing with health from within!

Review by Teresa Villanueva

Three books by Charles Dowding

How to Create a New Vegetable Garden: Producing a Beautiful and Fruitful Garden from Scratch UIT Cambridge

Charles Dowding's Vegetable Course Frances Lincoln Publishers

Organic Gardening – The natural no-dig way Green Books

Over in England, there is a vegetable gardener. His "little" gardens have been bountifully producing for almost thirty years. No tillage. No chemicals. Just compost, light hoeing and lots of planting. Well, not quite "just."

Charles Dowding is a legend among no-till gardeners on the other side of the pond, and to many in the United States as well. He has been gardening three decades or so and teaching for almost two. Although he has only been writing for about ten years, the three books reviewed here are only some of the many that Dowding has available. He is a wealth of practical experience such as only thirty years of devotion to an art can yield.

Dowding's overall growing philosophy is fairly simple. Top feed the soil with compost regularly. Don't dig or till. Stay on top of the weeds, especially in the first few years of establishing a growing space. Over time, this produces a well-nourished, low-weed soil that produces season after season reliably and well, with decreasing work and generally increasing yields.

In terms of style and content, I would use three "Ps" to describe Dowding's books. The first is, "Packed with information." The books cover a tremendous amount of ground (no pun intended), answering a variety of common questions. For example, what tools do you need? What approaches work best for starting plants? When should you do things like apply compost, hoe weeds or plant a particular crop? How deep should seeds be planted, and what should you do about various diseases and pests?

The second "P" is "Profoundly simple." You can find gardening books that are quite complicated in language and approach. These are different. Dowding excels at communicating a large amount of information in an easy-to-follow and understandable fashion. The books' tone is conversational. I wouldn't be surprised if the way he writes is similar to the way he speaks and teaches. Chapters and sections are well organized. Specific crop advice is easy to find.

The third "P" is "Practical." Dowding not only makes it easy to understand his approach but makes it straightforward to apply. He tells you everything you need to know in order to do what he does, including helping you understand the timeline it takes to transition yourself and your land to a no-till gardening mindset. The goal of his writing isn't information, but action. He wants you to get into the gardening game, so his books' entire focus is equipping you for food-growing success.

I especially appreciate Dowding's honesty and emphasis on weed management. If you are growing organically, there is no way to avoid a certain amount of weed work. As the soundtrack to *Rocky IV* made famous, "there's no easy way out." What we need to do is adopt approaches that make things easier over time, realizing that a proper up-front investment on our part will greatly lessen our work down the road.

There are a few small places I would kindly quibble with Dowding, but this is not unusual—if you were to get a dozen gardeners and farmers in a room together and ask them a question, you would probably get a dozen (or more) different answers.

For example, I recommend soil tests and more targeted management of soil nutrient levels, which is not mentioned in any of these books. I also would take a slightly different approach to a few other techniques or areas, such



The goal of Dowding's writing isn't information, but action. He wants you to get into the gardening game.



Revisioning Food, Farm and Forest: The Badges of Meadows Bee By Rick Veitch Meadows Bee Farm

This comic-book-style book was written to showcase the sustainable agriculture program designed for children at Meadows Bee Farm in Vermont. In the farm's Young Farmers Badge Program, children are involved in every aspect of farm life, engaging in lessons and subjects ranging from farm animal biology to beekeeping to fermentation. As the children progress through the program, they earn badges recognizing the skill they practiced. For example, in the dairy badge series, students earn a badge for learning milking, calving and cheesemaking.

Despite the format, *Revisioning* is primarily written for adult readers. Not shying away from the serious issues confronting our population's health and industrial food systems, author Rick Veitch's message is clear: "If we can't get back to nature and imagine solutions, then we're sunk." Parents and educators of young children will find inspiration in the story of the Meadows Bee Farm program. They might even find an idea of how to incorporate more nature, outdoor time and food production into their children's upbringing. Young children, meanwhile, will enjoy looking through the book's vibrant illustrations and discussing what is happening on the farm.

In the words of Weston A. Price, "You teach, you teach, you teach!" Certainly, the farm program at Meadows Bee Farm is doing just that. Whether or not the young participants grow up to be farmers, the education they are receiving is greatly needed in the quest to find a harmonious relationship with nature. Through the hands-on skills they practice on the farm, these children will be rooted in an understanding of traditional food systems and an appreciation for high-quality food and stewardship of land that they can carry on throughout their life. Review by Jane Kadish

Whether or not the young participants grow up to be farmers, the education they are receiving is greatly needed in the quest to find a harmonious relationship with nature.

Gardening Books by Charles Dowding

as using pelleted seed instead of pricking for small seeded plant propagation.

Dowding himself humorously expresses puzzlement over some aspects of biodynamic farming and its benefits (such as their digging and double-digging methods) and comments, "Nobody has all the answers! I hope you enjoy using the different ideas and methods presented in this book to create a way of gardening that works for you." And there is the crux of the matter—Dowding knows that when it comes to creating food, no approach works for everyone at all times and in all places.

Dowding's principles apply to almost any location, but because he is in England, his schedules and calendar may differ dramatically from other regions, especially in the United States. For example, large sections of his books would apply to people living in New England or the upper Midwest, but not as much to those living in Florida or Texas.

Note, too, that Dowding has spent his entire life working with clay and muck-type soils. If you are contending with sandy soils, some of his approaches and principles—such as his watering advice—may need adjusting for your soil conditions.

If you are new to gardening, Dowding's *How to Create a New Vegetable Garden* is a great place to start. If you are a more experienced grower and want a more information-heavy volume, his *Vegetable Course* is excellent. *Organic Gardening* falls somewhere in between, but all three are helpful and enjoyable reads that I don't regret having spent a few hours with. Two thumbs up.

Review by John Moody

All Thumbs Book Reviews: Children's Books

All the Places to Love By Patricia MacLachlan; Mike Wimmer, Illustrator HarperCollins (Ages: 2-7)

This picture book encompasses the beauty and simplicity of family life on a farm. It begins with the birth of the first child. The grandmother holds him, wrapped in a cloth made from the wool of their sheep. The illustrations are breathtaking and highlight the beauty of living in the country. The firstborn child grows up helping his grandfather on the farm, picking blueberries with his mother, and playing with the farm animals and wildlife. Time passes, and the next child is born, starting the cycle all over again. MacLachlan draws the reader into the story, making one long to just be and to relish the simple wonders of everyday life. "Where else can the soft sound of cows chewing make all the difference in the world?"

The Bee Tree By Patricia Polacco Puffin Books (Ages: 2-7)

The book's overarching theme is that reading can be full of sweetness and adventure. This is communicated by a grandfather to his granddaughter in going on a hunt for a honey bee tree. Mary Ellen thinks she is tired of reading, which may be a common sentiment of many children, especially in the summer. However, when her grandfather takes her on an adventure to follow a bee to the tree where honey is being made, many of the neighboring townsfolk are also intrigued. Some remember doing this same activity when they were young; others long to discover the unique sweetness of freshly harvested honey. When they finally find the bee tree, the townsfolk work together building a fire for the smoke they need and gathering pieces of honeycomb until they all celebrate with a feast. Polacco beautifully highlights the joy that can be shared when a community works to harvest from the land, but also the lesson Mary Ellen learns—that the "adventure, knowledge and wisdom" that come from reading a book must be pursued and worked for, just like following a bee to its honey tree.

Sleep Tight Farm: A Farm Prepares for Winter By Eugenie Doyle Becca Stadtlander, Illustrator Chronicle Books (Ages: 2-7)

This delightful and colorful picture book lays out all the chores that a family must do to prepare their farm for winter. Each aspect of farm life that must be properly taken care of as the winter approaches is also shown as it will be in its prime, and thus readers get a taste of what all the seasons are like on a working farm. These include: going from a hoop house with open sides in the hot seasons to one that is secured for winter to protect against the cold winds; surrounding bee hives with hay bales so that the honey can be harvested in September; cutting back berry bushes; and harvesting coldweather vegetables for barn storage. Evident is the idea that a good work ethic can be learned in the home, with all pitching in together. Young readers also get a glimpse of the hard work that is involved in keeping a family farm functioning. Reviews by Katy Vander Woude



A Message to Grandparents Sharing special meals and treats is a wonderful way to spend time

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Tim's DVD Reviews

Worldwide, the symptoms of AIDS usually resembled slow starvation. Coincidentally, I'm sure, the disease was most prevalent among the malnourished.

The Viral Delusion (Episodes 2–5) Paradigm Shift Pictures https://paradigmshift.uscreen.io/

In these episodes, we take an eye-opening tour of inconvenient facts in medical history. Here are some quick examples. It was decided long ago that bacteria cause anthrax and that is still the prevailing theory. However, some who are diagnosed with anthrax have the bacteria in question, and some don't. Some who are not sick have the bacteria, and some don't. Experts don't seem to be bothered by these inconvenient facts.

In the case of polio, scientists couldn't even pretend to find any bacteria involved, so they attributed "polio" to another cootie called a virus. To prove polio was contagious, they injected diseased spinal cord tissue from one monkey into the head of another monkey. When the monkey victim died, experts decided this proved something about contagion. They conveniently changed the definition of polio when the vaccine came out, so it looked like the vaccine worked.

Tom Cowan, MD, outlines the procedure for isolating the measles virus. You have to follow their method closely. It takes a lot of education to be this stupid. First, the properly educated expert immerses a throat swab from someone diagnosed with measles in a mixture of milk, bovine amniotic fluid, beef embryo extract and horse serum. All of these things are rich sources of genetic material. Vero (kidney) cells and antibiotics are then added, and the whole thing breaks down into genetic material. "Why are we doing this?" Never mind why. Just do it. Then, magically, you can extract DNA from "just the measles virus" in this mess. John Enders won a Nobel prize for this kind of science.

Centuries ago, there was a plague in Iceland, which modern science blames on rats even though there were no rats in Iceland until about two hundred years later. Maybe there were time-traveling rats. Or maybe just the cooties from rats traveled back in time.

The inconvenient facts associated with the Black Death in Europe are especially interesting.

Again, rats are the favorite scapegoat despite an awkward lack of evidence. There were a lot of things going on in northern Europe during that time. Eyewitness accounts speak of badly polluted air and water, earthquakes, weather anomalies and chaos. No mention of rats. A comet passing close to Earth left the atmosphere choked with debris. As physical evidence from tree rings and ice cores confirms, that area of the planet was severely compromised. Tree rings were much smaller than average, and ice cores were full of ammonium. Crops failed and famine followed. Between unbreathable air and famine, most either died or left.

Then there is the Spanish flu. It occurred just after powerful radio transmitters came online. The condition also was seven times more likely to strike vaccinated military personnel than unvaccinated civilians. Individuals overdosed with aspirin were also much more likely to die than those who avoided the drug. A well-designed study failed to prove the most contagious disease in recent history was... contagious. In fact, it actually proved Spanish flu was *not* contagious.

Moving to the later part of the twentieth century, we have AIDS proposed as being caused by a virus called HIV even though many "HIVpositive" people were not sick and many AIDS patients did not test positive for HIV. During the early days of AIDS, we were informed we were all going to die. How many times have the news media said that? How many times have they been right? The disease threatened to disappear several times but scientists rescued it from obscurity by redefining the disease to include more and more symptoms. Worldwide, the symptoms usually resembled slow starvation. Coincidentally, I'm sure, the disease was most prevalent among the malnourished. In the U.S., heavy drug users were one of the hardest-hit demographics. That changed when the drug-users themselves figured it out and quit using.

There are many other examples of this clown science. After watching this series, you may wonder whether there is any intelligent life at all on this planet. Me, too. How did we go so wrong

Tim's DVD Reviews

so badly and so often? I think Einstein was right when he said the difference between genius and stupidity is that genius has its limits. The thumb is UP for this video series.

Infertility: A Diabolical Agenda Executive Producer Robert F. Kennedy, Jr. Directed by Andy Wakefield https://infertilitymovie.org/

The dramatic rise in infertility is starting to attract attention from everyone except the mainstream media. While the media are busy inserting their head in the sand (or other even worse places), it is a matter of public record that the WHO has funded research into vaccines that cause sterilization.

Historically, Africa has supplied many human guinea pigs because it often has been easier to get away with violations of basic human rights there, but the Covid jabs have extended the pool of guinea pigs to the entire world. Nairobi, Kenya is one place in particular that has seen infertility rates skyrocket. In Africa, you will not find too many volunteers willing to be sterilized, so the engineers of infertility implemented their scam masquerading as a tetanus vaccination campaign.

Dr. Stephen Karanja was a Kenyan doctor with a conscience who blew the whistle on the scam and worked hard to put an end to it. More recently, he also raised the alarm about Covid scams. Tragically, he died of Covid-19—or so they say. He may be gone, but his warning lives on: "When they're through with Africa, they're coming for you."

The thumb is UP.

Something Is in the Air: The cell phone radiation documentary Produced by Ville Nuoraho Directed by Heidi Martikainen https://www.youtube.com/ watch?v=Q89Gv2P3RH8

At the beginning of this video, we hear the statistic that sperm counts are down 50 percent

from normal in all technologically advanced countries. I guess that's good news if you believe the planet is overly infested with human parasites. However, some people are in favor of protecting the human species from complete annihilation. Even some governments, like the Swiss canton of Geneva, have halted all 5G installations due to evidence that various forms of artificial radiation could be a cause of infertility.

Einstein is attributed with the statement that if bees disappeared from the Earth, mankind would have four years to live. If we are talking specifically about honeybees, I don't think that is true. The honeybee is an invasive species from Europe, which Native Americans survived without for thousands of years. (Don't get me wrong. I think honeybees are great, and their disappearance would be a great loss.) We see in this film an interview with a scientist who studied what happens to bees exposed to mobile phone radiation. After twenty-five to forty minutes of exposure, the queen and a large number of worker bees leave the hive. Whether scientists and regulators in general think there is any problem with radiation, the bees seem to think there is a problem. Other studies show that tree growth is affected by nearby base stations.

As always, there is controversy over what the studies show. A lot of that can be explained by noting that most industry-backed studies come to the opposite conclusion of independent studies on the same subject. Hence, the scientific conclusion is that money strongly affects the "science."

The real research has clearly shown since the early 1970s that radiation negatively affects human health. The Naval Medical Research Institute looked at thousands of studies in 1971. Effects included decreased fertility, headaches, insomnia, fatigue, depression and the list goes on. If your thinking is not muddled by money or radiation, the conclusion is clear, and the thumb is UP for this video. Whether scientists and regulators in general think there is any problem with radiation, the bees seem to think there is a problem.

Vaccination Updates POPULATION CONTROL—THE VACCINE COMPONENT MAY SURPRISE YOU By Kendall Nelson, Director, *The Greater Good*

Ask people what they believe is the biggest problem facing the world, and many will say overpopulation. They subscribe to the notion that too many people worsen environmental and social factors, leading to pollution, depletion of resources, habitat loss, poverty and international conflicts. Others deem the panic about overpopulation unwarranted and a cover story for human rights abuses—including millions of forced sterilizations in Mexico, Bolivia, Peru, Indonesia, Bangladesh and India, as well as China's draconian one-child (now two-child) policy. This second group references United Nations (UN) graphs showing that the birth rate is actually declining¹ and maintains that overpopulation "doomsayers' fears have failed to materialize again and again."²

In theory, the topic of overpopulation could make for an interesting debate. Arguably, those on each side of the issue could make their case in a myriad of ways. Any sane person, however, will agree that elimination of those deemed less valuable by a particular society or person is immoral and should never be recognized as a legitimate "population control" tool, even in the name of "saving the planet." Yet historically, there have always been individuals comfortable with deciding who gets to procreate, who lives and who dies—even in America. "Society has no business to permit degenerates to reproduce their own kind," said President Theodore Roosevelt. "The elderly are useless eaters" and "World population needs to be reduced by 50 percent," said former U.S. Secretary of State, Dr. Henry Kissinger.³

TWO POPULATION CONTROL AGENDAS

The line of thinking espoused by Teddy Roosevelt and Kissinger does not just apply to the past. Currently, there are two readily discernible population-control agendas, each of which has been in the works for decades, orchestrated by an "elite" group. One agenda focuses on centralized control of the masses' behavior, and the other—even more sinister—agenda involves the actual prevention of future births and the elimination of whole population groups.

One need look no further than the World Economic Forum's (WEF's) website to see the organization's cleverly concealed aspirations for a oneworld order that would replace capitalism with Marxist-based economic and social policies, outlined in the "Great Reset" initiative.^{4,5} On June 13, 2019, the WEF and the UN signed a Strategic Partnership Framework outlining areas of cooperation to deepen institutional engagement and jointly accelerate the implementation of the 2030 Agenda for Sustainable Development (Agenda 2030). On the surface, this agenda might sound admirable, but what the plan really entails—under the guise of achieving seventeen "sustainable development goals" (SDGs)—is a "global government takeover of every nation across the planet, dismantling sovereignty, property rights, privacy, food systems and more."⁶ For example, Agenda 2030 acts to restrict farming and transform food systems.⁷

A CRIMINAL SYNDICATE

The world's most powerful leaders in academia, politics, non-governmental organizations, business, legacy media and the arts are not necessarily admitting to their attempts to destroy individual and national sovereignty. However, the WEF's intentions were readily apparent in 2016 when it tweeted a quote from Danish Parliament member, Ida Auken, that read, "Welcome to 2030. I own nothing, have no privacy, and life has never been better."⁴ As translated by Catherine Austin Fitts, former Assistant Secretary of Housing in the George H.W. Bush administration and publisher of The Solari Report, what the tweet really meant was, "Welcome to 2030. We have stolen all your assets and you are mind controlled."

Fitts explains very well the two agendas being perpetrated by those she calls "Mr. Global," who include central bankers. Regarding centralized control, she warns that human slavery has been the single most profitable business in the world—and now the global "elite" are coming for our children. As she says, "They can print money. They do not want your money. They want your land, your gold, and your children." In essence, she says, "central bankers are trying to create a system where they are completely free of the laws of nation-states and governments" a "lawless criminal control syndicate where it's legal for them to do whatever they want."⁸

If we look closely, we see that the globalists' plans include not just enslavement of humanity—through an openly promoted chipped, transhumanist society⁹—but also a reduction in population size. Fitts assesses the situation

as a war: "We are at war right now, and they are trying to kill us."10 One war front involves what Fitts calls "the Great Poisoning" via toxins in food, water and air: GMOs, antidepressants, electromagnetic field exposures, chemtrails/geoengineering,11 vaccines and much more. These exposures are making our children sicker than any generation before them. All the while, we are seeing the intentional dismantling of global systems of food and energy production, which in turn promises to lead to outcomes such as famine and more war.12 Drought, inflation and misdirected green policies are threatening the U.S. food supply.¹³ Poverty, a known killer, is also a major concern, with the Consumer Price Index at a forty-year high, having jumped by a reported 9.1 percent (year over year) in June 2022.14

WEAPONIZED VACCINES

Vaccines are a major weapon used to control the world's population. Speaking of the global population, Bill Gates said in 2010, "If we do a good job using vaccines, health care and reproductive health services, we can lower that by 10 to 15 percent."15 A new vaccinerelated documentary directed by Dr. Andrew Wakefield, Infertility: A Diabolical Agenda,¹⁶ powerfully illustrates this theme, shining a light on long-standing depopulation efforts. The film tells the story of World Health Organization (WHO) vaccination programs conducted in Africa and alleged to have intentionally resulted in infertility, sterilizing young girls and women of childbearing age in Kenya-first in 1995 and then again in 2014. Under the guise of two separate vaccination campaigns supposedly aimed at prevention of neonatal tetanus, the WHO allegedly stripped millions of Kenyan women of their

ability to carry a pregnancy to term—without their knowledge or consent.

The tetanus vaccines administered in Kenya were made with synthetic human chorionic gonadotropin (hCG), which causes the development of antibodies against naturally occurring hCG—a hormone produced by the placenta that plays a unique role in sustaining and supporting pregnancy. Vaccination with the tainted tetanus vaccines would prompt a mother's immune system to mistakenly attack and destroy the essential hCG produced within her own body, effectively working to either abort existing pregnancies or prevent future pregnancies.

Development of anti-fertility vaccines began in the 1970s in response to perceived overpopulation, led by figures such as Dr. G.P. Talwar in New Delhi, India.¹⁷ Published papers confirm that by 1976, researchers from the WHO Task Force on Vaccines for Fertility Regulation had successfully conjugated (meaning "attached" or "combined") hCG onto tetanus toxoid (TT). In 1993, the WHO publicly announced its "birthcontrol" vaccine for "family planning." While that could sound well-intentioned to some, critics agree that "WHO publications show a long-range purpose to reduce population growth in unstable 'less developed countries.""¹⁷ In fact, WHO has encouraged depopulation policies and has studied depopulation strategies for decades in Asia (Bangladesh, India, Indonesia, Pakistan, the Philippines, Thailand), Latin America (Brazil, Columbia, Mexico), Africa (Egypt, Ethiopia, Nigeria) and Europe (Turkey).18,19

As explained in Wakefield's film, Dr. Stephen K. Karanja, the now deceased former chairman of the Kenya Catholic Doctors Association, first alerted the Kenyan government of his suspicions regarding an abortifacient

NOT A CONSPIRACY THEORY

In an interview about *Infertility: A Diabolical Agenda*, Mary Holland, president of Children's Health Defense (coproducer of Wakefield's film), stated, "I think this film really helps us understand that this is not a conspiracy theory. It's an absolute reality."⁸⁷

As the co-author of a book about the dangers and injustices of human papillomavirus (HPV) vaccines, titled *The HPV Vaccine on Trial: Seeking Justice for a Generation Betrayed*, Holland has a broader context for understanding what happened in Kenya.⁸⁸ Describing the rollout of HPV vaccines, she said, "One of the things we saw was that. . . the teen pregnancy rate dropped from 50 percent from 2007 to 2018. Now, whatever one wants to think about unplanned pregnancies, that is a staggering drop over ten years." Though the potential association between HPV vaccines and premature ovarian failure (POF) in young women is by now well-documented,⁸⁹ so-called health workers still routinely give the HPV vaccines.

Development of anti-fertility vaccines began in the 1970s in response to perceived overpopulation. With the global rollout of Covid injections, questions about the use of "vaccines" as a stealth infertility weapon have become even more pressing. tetanus vaccine back in 1995. Karanja, an OB/ GYN, had learned in November 1993 that the Catholic Women's League of the Philippines had won a court order to halt a UNICEF anti-fertility program which used an hCG-laced tetanus vaccine. By the time of the court order, three million Filipinas had already received the vaccination. Karanja also noticed the unusual fact that unlike regular tetanus vaccination programs, which call for only one injection every five to ten years, the WHO programs instructed women to be vaccinated with a series of five injections, spaced six months apart-the identical schedule called for by the WHO's anti-fertility vaccine to produce sterility. Soon after Karanja sounded the alarm, the Kenyan program ended without explanation.

Nineteen years later, a second anti-fertility vaccination campaign was once again underway in Kenya. Encouraged by Karanja, leaders of the Catholic Church contracted with three independent and accredited biochemistry laboratories in Nairobi to test samples from vials of the WHO tetanus vaccine obtained in the field in March 2014. They found hCG where none should be present. In October 2014, Catholic doctors sequestered six additional vials that again were tested in six accredited laboratories, which found hCG in half the samples.¹⁷

When Catholic bishops went public with their findings, urging young girls and women not to comply with the vaccination campaign, the Kenyan government went on the offensive, insisting that the vaccines were safe. Meanwhile, the government attempted to demonize the Catholic Church and accused its leaders of deliberately contaminating samples and of peddling misinformation. In search of the truth, Wakefield's investigative team revisited one of the laboratories, AgriQ Quest, and found forensic evidence from the vaccine vials that proved the government had lied to its people.¹⁶

Wakefield's film reminds us of the informed consent principles that have guided the ethical practice of modern medicine since the midtwentieth century. According to Barbara Loe Fisher, president of the National Vaccine Information Center (NVIC), informed consent means a patient must be given complete and accurate information about the benefits and risks of a medical procedure or pharmaceutical product; must be free to make a voluntary decision about whether or not to take the risk; and must not be subjected to harassment, coercion or sanctions for making an informed, voluntary decision about taking a risk.²⁰ Clearly, informed consent was not granted to Kenya's women.

THE LATEST INFERTILITY INJECTIONS

With the global rollout of Covid injections, questions about the use of "vaccines" as a stealth infertility weapon have become even more pressing. Note that the word "vaccine" is in quotes because the shots are not vaccines but rather, in the words of industry insiders, a form of gene therapy.^{21,22} The U.S. Food and Drug Administration (FDA) defines gene therapy as "a technique that modifies a person's genes to treat or cure disease."²³

Worldwide, women are reporting numerous fertility problems and horrific pregnancy outcomes following the Covid injections. In an analysis of Pfizer-BioNTech data released in May 2022, Dr. Bryam Bridle described how out of two hundred seventy pregnancies, Pfizer provided no outcome information for two hundred thirty-eight women (88 percent).²⁴ The other outcomes reported by Pfizer included just one normal outcome, along with twenty-three spontaneous abortions (that is, miscarriages), five pregnancies with "outcome pending," two cases each of premature birth with neonatal

IN THEIR OWN WORDS

In 1991, David Rockefeller made a speech at a Bilderberg conference that included these memorable words:

"We are grateful to the *Washington Post*, the *New York Times, Time Magazine* and other publications whose directors have attended our meetings and respected their promises of discretion for almost forty years. . . . It would have been impossible for us to develop our plan for the world if we had been subjected to the lights of publicity during those years. But the world is more sophisticated and prepared to march towards a world government. The supernatural sovereignty of an intellectual elite and world bankers is surely preferable to the national auto-determination practiced in past centuries."⁹⁰
death and spontaneous abortion with intrauterine death, and one spontaneous abortion with neonatal death. In a more detailed analysis of twenty-nine pregnant women reporting an adverse reaction after a Covid injection, only one had a baby who lived.

In Australia, Dr. Luke McLindon, a senior fertility doctor and President of the Australasian Institute for Restorative Reproductive Medicine, warned that 74 percent of the women "vaccinated" against Covid in his practice were having miscarriages. McLindon subsequently was fired for refusing to get the Covid jab himself and for making his findings public.²⁵ In the UK, funeral director and whistleblower John O'Looney says, "There have been more babies dying now than ever and the thing they all have in common is their moms were vaccinated."²⁶ Meanwhile, manufacturers are reporting a 400 percent increase in sales of small-size caskets for children.²⁷

Women are also experiencing menstrual changes after Covid "vaccination." An analysis published in July 2022 in the journal Science Advances found that 42 percent of women with regular menstrual cycles reported bleeding "more heavily than usual" after vaccination.28 Meanwhile, 44 percent reported no change and 14 percent reported lighter periods.²⁹ Many non-menstruating women also experienced "breakthrough" or unexpected bleeding after their Covid shots-including fully two-thirds of postmenopausal women. Although the media continue to report that these menstrual irregularities are "normal,"30 research has linked abnormal menses to uterine and cervical cancers, bleeding disorders, thyroid dysfunction, other pituitary disorders affecting hormonal balance, infection and perimenopause.³¹⁻³⁴

In 2021, women also experienced an unprecedented rise in decidual cast shedding (DCS)—the expulsion of the uterine lining "all in one piece" resembling the contours of the uterus.³⁵ The authors of a study published in April 2022 note the anomaly, pointing out that DCS historically is rare; before the Covid injections, less than forty cases had been reported in over a century of medical literature.³⁶

Further, there are indications that the Covid shots could potentially cross-react—in ways that might impair reproduction—with syncytin (a protein that is "an essential prerequisite for a successful pregnancy") as well as with reproductive genes in sperm, ova and placenta.³⁷ Research also shows that the lipid nanoparticles (LNPs) in Covid shots have a "special affinity" for the ovaries as well as the liver and spleen.³⁸ Other recent research found that two doses of the Pfizer-BioNTech Covid shots impaired semen concentration and motile counts in men for about three months.³⁹ This begs the question: what happens to a man's sperm if he gets additional doses? (For more in-depth information on reproductive harms from the Covid shots, see my article titled "Covid Injections: The Emerging Reproductive Fallout" in the Fall 2021 issue of *Wise Traditions.*⁴⁰)

THE GENOCIDE AGENDA

Across the globe, the widespread rollout of the experimental Covid shots appears to have caused a sharp increase in deaths blamed on "Co-vid-19." A late 2021 analysis of publicly available data showed that in the vast majority of countries that deployed the gene-based "vaccines," mortality increased promptly and significantly.⁴¹ The study, which looked at data from one hundred forty-five of the most vaccinated countries, identified a "statistically significant and overwhelmingly positive causal impact after vaccine deployment" on total deaths per million "associated with" Covid-19—an average causal impact of 463 percent—a finding that the researcher understatedly suggested "should be highly worrisome for policy makers." The injections are so dangerous that the formerly promandate German Federation of Hospitals has demanded an end to Covid vaccination mandates, stating that it is "not sensible. . . to continue."⁴²

Others have reported similar findings at the national level. For example, an investigation of weekly reports by the United Kingdom Health

ALSO IN THEIR OWN WORDS

During the public comment period of the meeting of FDA advisors on June 15, 2022, Congressman Louis Gohmert (R-TX) told FDA, "There are many unanswered questions regarding the safety and efficacy of Covid vaccines, especially for babies and young children, and I am deeply concerned that the push to vaccinate these children is nothing more than a dystopian experiment with unknown consequences."⁹¹

In July 2022, Senator Ron Johnson (R-WI) wrote a letter to CDC, following a freedom of information request that showed that the agency never conducted a required data mining analysis on adverse events reported in association with Covid injections. CDC is supposed to perform analyses on a weekly basis that compare Covid-"vaccine"-related adverse events reported to VAERS with adverse events linked to other vaccines.⁹² Sen. Johnson scolded, "The American people deserve the truth and you have not been providing it. That is why I, together with millions of Americans, have completely lost faith in the CDC and other federal health agencies. It is time to start regaining their confidence and your agency's integrity by coming clean, being transparent, and telling the truth."

Security Agency (UKHSA) on influenza and Covid-19 revealed that fully vaccinated individuals were three times more likely to die of "Covid-19" than unvaccinated individuals.⁴³ Here at home, the same pattern holds true; far more Americans deaths are attributed to the coronavirus since the introduction of the shots than before the injections were introduced.⁴⁴

The Vaccine Adverse Event Reporting System (VAERS) provides more evidence that the Covid injections are the most dangerous drug in modern medicine. As of August 5, 2022, VAERS displayed nearly 1.4 million adverse events following Covid "vaccination," including over thirty thousand reported deaths and over thirty-three thousand reactions deemed "life-threatening."⁴⁵

All-cause mortality and deaths from "unknown causes" or non-Covid causes are also sharply on the rise. In the Canadian province of Alberta, "unknown causes" are now the number-one killer—a "staggering" seven times higher than recorded deaths from unknown causes in 2019; in 2021, mystery deaths claimed more lives than heart disease, diabetes and stroke combined.⁴⁶ By October 2021, officials in Taiwan were admitting that the number of people dying after the injections had exceeded the number of deaths from Covid-19.⁴⁷

In public comments at a June meeting at which FDA's vaccine advisory panel voted to recommend new Covid boosters, one commenter described "comparable trends in BLS [Bureau of Labor Statistics] data, German health insurance data, Israeli ambulance data" and VAERS data all pointing to a "stark increase" in deaths of working-age adults in the latter half of 2021.⁴⁸ The fifth largest life insurance company in the U.S. paid out 163 percent more for deaths of people ages eighteen to sixtyfour in 2021 over 2020.⁴⁹ For those interested in learning more about the crimes being committed against humanity, there is an excellent (though difficult-to-watch) documentary titled "mRNA Vaccine Genocide 2021-2022: Testimonies from the Victims and Medical Staff."⁵⁰ The Doctors for Covid Ethics website also provides a consolidated list of over seven hundred fifty relevant studies about the dangers of Covid injections.⁵¹

AND NOW, THE BABIES

Despite all the warning signs, Covid injections are now also available for babies. On June 15, 2022, members of an FDA advisory committee ignored pleas to "First do no harm"⁵² submitted by concerned medical experts, vaccine-injured persons and a Congressman representing seventeen other lawmakers⁵³ and instead voted twenty-one to zero to expand emergency use authorization (EUA) of both the Moderna and Pfizer-BioNTech Covid gene therapy injections for use in children under five and as young as six months of age.^{54,55} Within two days, the FDA had approved the EUA amendment and members of a Centers for Disease Control and Prevention advisory committee had unanimously recommended the shots, with CDC director Rochelle Walensky immediately endorsing the recommendation.⁵⁶ These decisions expanded eligibility for "vaccination" to nearly twenty million children as the U.S. became the first country to give the Covid mRNA injections to children under age two.

An analysis of VAERS data showed at least fifty-eight cases of lifethreatening side effects experienced by infants and toddlers under age three by mid-June.⁵⁷ As of early August, VAERS data showed almost three thousand adverse events (including five deaths) in children under age five, as well as over thirteen thousand adverse events (including twenty-two deaths) in kids between ages five and eleven and nearly thirty-three thousand adverse events (comprising one hundred eighteen deaths) in adolescents ages twelve to seventeen.⁴⁵

Emerging research about the Covid jabs' impact on children, adolescents and young adults is furnishing additional details that are highly concerning. A study by Israeli researchers of young adults (ages sixteen to thirty-nine), published in April 2022, revealed an increase of over 25 percent in cardiovascular-related emergency calls in Israel's under-forties, both male and female, following the rollout of Covid vaccines in the first half of 2021.⁵⁸ In Thailand, a study of several hundred Thai adolescents (aged thirteen to eighteen) observed adverse effects on the heart in 29 percent of young recipients of Pfizer-BioNTech Covid shots.⁵⁹

Although the medical literature confirms an ever wider range of serious injuries associated with the Covid injections in young people—not just heart problems but also anaphylaxis, blood disorders and immune-mediated neurological disorders like Guillain-Barré syndrome⁶⁰—this did not prevent FDA from making its June determination "that the known and potential benefits of the Moderna and Pfizer-BioNTech COVID-19 vaccines outweigh the known and potential risks in the pediatric populations authorized for use for each vaccine."⁶¹

The CDC followed suit in its statement issued the next day, recommending the jabs for young children and making the incredible claim that "COVID-19 vaccines have undergone—and will continue to undergo—the most intensive safety monitoring in U.S. history."⁵⁶ CDC director Walensky told doctors and parents, "All children, including children who have already had COVID-19, should get vaccinated."⁶² The Covid shots are the first "vaccine" to be recommended for and administered to infants in the U.S. that have not been fully licensed, and they will now be given at the same time as other CDC-recommended childhood vaccines, making a six-month-old baby eligible to receive ten vaccines on the same day.63

Nor should we be lulled into believing that the other vaccines on the childhood schedule were properly studied and monitored, Walensky's statements about "safety monitoring" notwithstanding. Not one of the licensed vaccines on the childhood schedule has ever been studied using an inert placebo or when given in combination with other vaccines, nor have any childhood shots been studied by comparing vaccinated and unvaccinated children.

The UK's Dr. Clare Craig has explained that Pfizer's pediatric clinical trial recruited over forty-five hundred children aged six months to four years of age, but three thousand of those children did not make it to the end of the trial.⁶⁴ Why so many dropouts? Without an answer to that question, the trial should have been deemed null and void. Moreover, after only six weeks of follow-up, the researchers unblinded the children in the placebo group and offered them the injections—thus destroying the control group forever.

Leaked Israeli documents reported on by the Alliance for Human Research Protection (AHRP) and known to the Israeli Ministry of Health revealed that in the first half of 2022, children in the five- to eleven-year age group who received the Pfizer-BioNTech shot had two to four times as many adverse events as children in the twelve to seventeen age group.⁶⁵ As AHRP noted, "This doubling of vaccine injuries is, in itself, extremely disturbing—and should have been immediately brought to the attention of the nation's parents," yet parents were not informed. Instead, the Ministry recommended booster shots for the younger children—"thereby increasing the risk for serious harm."

Moderna, for its part, unblinded its pediatric control group after just fifty-three days.⁶⁶ In documentation provided to the FDA about its pediatric results, says Toby Rogers, PhD, Moderna used "a shell game to hide bad data," adding "endless layers of complexity" to "create noise" and make its findings difficult to understand.⁶⁷ For example, Moderna should have presented FDA with four separate documents for each age group—ages twelve to seventeen years, six to eleven years, two to five years and six to twenty-three months. Rogers suggests that the company neglected to do so because the results looked terrible when considered by individual age group. Moderna also subdivided its adverse events data to eliminate signals and complicate the results.

Buried in the briefing document it prepared for FDA to request EUA for children under age eighteen, Moderna stated, "In the adolescent population 99.2% of vaccine recipients reported at least one adverse reaction after any injection with 25.3%"—one in four!—"reporting a reaction that was *Grade 3 or higher*" [emphasis added].⁶⁸ (Grade 3 events "are serious and interfere with a person's ability to do basic things like eat or get dressed" and "may also require medical intervention." Grade 4 events typically require hospitalization, and Grade 5 events are fatal.⁶⁹) But because adverse reactions were also somewhat high in the placebo group, Moderna proclaimed the "vaccines" safe.

Finding this assertion "very strange," quantitative analyst Jessica Rose theorizes that the company may not, in fact, have used an inert placebo, stating, "I still have a very strong suspicion that these 'placebos' are not saline and rather [are] empty LNPs."⁷⁰ Rose is making reference to lipid nanoparticles—the delivery vehicle that both Pfizer and Moderna use to get mRNA into the cell—with an "empty LNP" being nanoparticles without the mRNA antigen.

MONEY AND MORE

Clearly, the fix to inject children under five was in from the beginning, a fact made clear when the Biden administration unveiled its operational plans a full week before the FDA advisors' deliberations about the matter. This plan included purchasing ten million doses of pediatric Covid shots, and "millions more. . . in the coming weeks," to be made available at doctors' offices, clinics, hospitals, pharmacies and other community-based organizations.⁷¹

The immune systems of infants and toddlers are developing and immature and, therefore, they are the last population that should be test subjects for experimental injectable products with undisclosed ingredient lists. A study in *The Lancet* showed that even in adults, those who received two doses of the shots had lower immune function after eight months than those who did not take the shots.⁷² Thus, when FDA, CDC and their advisors rubber-stamped the Covid shots for children, they failed spectacularly in their duty to protect public health, instead choosing to back Moderna's and Pfizer's stunning works of fiction. Why?

Clearly, financial interests are one reason the pharmaceutical and biopharma industries pushed for Covid injections for young children. The regulatory agencies—beholden to industry through user fees⁷³— were willing to oblige by making decisions that now ensure hundreds of billions of dollars in profits.

A second reason for the FDA's and CDC's unseemly zeal in okaying the injections for babies is that granting EUA for the last remaining age group takes manufacturers one step closer toward securing permanent liability protection. Currently, the drugmakers enjoy liability protections under the Public Readiness and Emergency Preparedness (PREP) Act,⁷⁴ but when the Covid "emergency" eventually is declared over, the only way for them to continue having immunity from lawsuits is to get their products onto the CDC's recommended childhood vaccination schedule. Once a vaccine is on the schedule, its manufacturer is permanently shielded from liability for injuries or deaths that occur in any age group, including adults. At that point, the only way indemnity would fall by the wayside would be if fraud could be proven—and to do so, one would have to meet an almost impossibly high burden of proof showing that the vaccine maker knew about the safety issues and then withheld that information.

A third plausible reason for the eagerness to endorse Covid jabs for young children—thereby positioning them for the childhood schedule—is that this will allow the government to mandate the shots.⁷⁵

FACING EVIL

Ultimately, we have to ask whether the government's unscientific go-aheads to give children Covid jabs and dozens of other shots reflects a deeper and even more menacing motivation—to impair our children's ability to have children of their own. While some people maintain a blind trust in corrupt governmental organizations like the FDA, CDC and WHO, the threat to children has prompted many others to see the light. Everyday people are learning about and grasping the criminal intent of these entities, exemplified by the WHO's Orwellian "Future Framework" scheme to allow Moderna and Pfizer to "reformulate" Covid-19 mRNA injectables in perpetuity, without conducting clinical trials.^{76,77} These actions have caused a tsunami-like loss of confidence in medical and governmental "experts" and as a result, Americans are turning away from the experimental Covid shots and rejecting the "New Normal Reich" that insists on integrating vaccine mandates, passports and mask-wearing into everyday life.⁷⁸

If anything good can be said of the Covid fiasco, it is that most Americans have become "anti-vaxxers," whether they know it or not. Childhood uptake for Covid shots is low, adults are not getting second or third shots, and many have awoken to the fact that there are fundamental flaws with the entire vaccine program—not just with Covid injections.⁷⁹ Between December 2020 and May 2022, public and private entities in the U.S. had to discard over eighty-two million doses of Covid shots due to low demand.⁸⁰ People realize they have been deliberately lied to about the magnitude of the SARS-CoV-2 threat, and quite frankly, they are not going to buy into the "endless pandemic" narrative any longer.

As more and more people break free from the Covid "Matrix," they will stop complying with Orwellian measures. With the evil policies implemented during Covid, globalist tyrants may have sown the seeds of their own undoing—and especially when they come after our progeny. We will not stand by as they attempt to normalize things like hormone blockers for children and transgender surgeries for teenagers.^{81,82} We will not be seduced as they try to sell us on the idea of "virtual children" in the metaverse to help combat overpopulation.⁸³ We will not allow the government to parent our children.

Maybe we should thank "Mr. Global" for making his plans so transparent. Because of Mr. Global's lack of subtlety, more people are learning about health and standing up for liberty. We the People are connecting the dots. As more food, energy and economic crises are engineered—similarly to the Covid plandemic (foretold during Event 201)—people are becoming ever more conscious and able to cast off Mr. Global's lies.

Thus, when the UK issues an "urgent warning" that gardening can cause heart disease, we can laugh at the absurd notion. When the Friedman School of Nutrition Science discourages the consumption of animal foods by falsely rating them as unhealthy and gives high nutritional ratings to ultra-processed foods, we do not have to rush out to buy such products,⁸⁴ nor eat bugs as suggested by the WEF.⁸⁵ When the Merck Foundation makes a television series about breaking the stigma attached to female infertility, we can question why the women are infertile rather than blindly tuning in.⁸⁶

But it is not enough to simply scoff at all the absurdities. We must also act, and we must do so through non-violent civil disobedience. Let us model ourselves after the Canadian truckers and the Dutch farmers in the Netherlands—but let us also be careful. Remember that those who subscribe to a top-down "New World Order" governance model see conscious people as an existential threat. We must take to heart the late Dr. Karanja's warning at the end of Wakefield's infertility film: "When they are through with Africa, they are coming for you." Nevertheless, it is incumbent on us to rebuild the civilization we want. What does that look like to you?

Kendall Nelson is a documentary filmmaker actively engaged in directing, producing and distributing media that matter. With over twenty years of television and film experience, Nelson's lifelong commitment is to bring about awareness through her work, including advocating health freedom, simple living and real food. She is an Idaho chapter board member of the International Women's Forum.

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Farm and Ranch COWS ARE PEOPLE TOO By Joel Salatin

Recently, the Canada-based Munk Debates program asked me to debate Peter Singer on animal rights. Munk Debates are culturalissues-oriented debates, presented two per year.

Peter Singer is professor of bioethics at Princeton University who came to fame in 1975 with his blockbuster book *Animal Liberation*. He's considered the modern guru of animal rights; his thinking and writing fuel the nolivestock agenda.

The resolution for the debate took a while to hash out, beginning with "Eating animals is always wrong" to the final wording: "Be it resolved that *animals don't belong on our plates.*" I deeply appreciated the Munk Debate folks steering the resolution to simplicity rather than wordiness. That added precision and elegance to the arguments.

I'll recap some of the salient points in the debate and then I'll offer my arguments against the resolution. As livestock farmers, we must be prepared to offer articulate and credible defenses for not only raising livestock, but also for the necessary slaughter, preparation and eating of these animals.

LIVES TO LEAD

Singer emphasized suffering more than anything. I'm sure that throughout his career he has tangled normally with conventional livestock producers and the confinement protocols that approach entails. To have an adversary readily agree that factory farming was unethical, who loved animals enough to respect their physiological attributes (the pigness of pigs and chickenness of chickens) was surely aberrant.

His overriding philosophy, admittedly not a believer in any religion, was that humans are merely highly evolved animals, that there is no real difference as to kind. That gives humans no right to capture and use animals for our purposes; doing so is akin to slavery and colonialism. He said it was unethical to give less attention to animals' interests than to human interests. Living without livestock, he said, would end the propensity of humans to exploit things.

"Animals have lives of their own to live and we should not deprive them of their ability to live out their lives; it's the same as the white race capturing and mistreating Africans," he said, adding that "we don't consider them as beings that could have lives that go badly." When I pushed him about plants being able to respond to each other and outside stimuli, he said those reactions are simply biochemical and not choices the plants make. "I don't think plants are conscious," he said, although he admitted that earthworms he accidentally sliced with his potato spade were a gray area he had not yet resolved.

I pointed out that it would be quite difficult for Eskimos and impoverished travelers not to eat any fish or animals. Lentils and tomatoes are hard to transport and don't grow all over the world. He said the debate had nothing to do with these fringes, but what most people eat. I reminded him that "animals don't belong on our plate" made no concessions to geography, history, social or economic extremes; the topic he agreed to debate was straightforward and allencompassing. He accused me of debate trickery when I suggested good-naturedly that obviously I won the debate since he conceded there are places and times where his ethics didn't apply.

We each had a short rebuttal to conclude the debate, and he summed up his position with this statement: "My major argument is to see animals as having lives to lead that can go well or badly, and we as humans have no right to use them for our benefit."

Some people might argue that I wasted my time getting sucked into this debate with a fel-

We must be prepared to offer articulate and credible defenses for not only raising livestock, but also for the necessary slaughter, preparation and eating of these animals.

Taking a blanket, allencompassing position that animals should not be on our plate disrespects and dishonors historical, religious and cultural beliefs. low who clearly is as intransigent as I am. But I think formal exchanges like this can tease out underlying philosophies that help us understand the underpinnings of how people think. And as we push back in a debate, it forces the other side to admit things they might not admit in normal conversation. Clearly, Singer's main public position, where he's comfortable, is in denigrating factory farming.

Presented with a farming system that honors and respects animals, he had to dig a little deeper into his ethics foundations. He did admit that pastured livestock would be a helpful ethical step, but immediately retreated into the stereotypical ignorance of the "can't feed the world" argument and "cattle burps create greenhouse gases" that will turn us all into crispy critters in a few decades. I assured him he was wrong on both those counts.

That's a synopsis of the debate. Now let me present the arguments I prepared for the negative side of "animals don't belong on our plates."

NUTRITION

Numerous essential nutrients come from meat, poultry and dairy. Many studies have been highlighted in books authored by Zoë Harcombe, Diana Rodgers, Robb Wolf, Nicolette Niman, Lierre Keith and many others. If you read all these and still believe animals are not important for human nutrition, let's talk.

CULTURE

Jews, Muslims and even Buddhists have religious rites and festivities centered around slaughtering and eating animals. The Maasai culture is completely wrapped up in cattle. Taking a blanket, all-encompassing position that animals should not be on our plate disrespects and dishonors historical, religious and cultural beliefs. That doesn't sound very inclusive to me.

ECOLOGY

No animal-less ecology exists, and we can't revert to pre-agricultural ecosystems unless we humans vacate. Since that's not a practical path, domestic livestock must step in to fill the role once filled by the mastodons, bison, passenger pigeons, beavers and other native herds and flocks. These animals performed essential ecological services—from pruning (grazing) to democratizing fertility (grazing in valleys and lounging on hilltops to deposit manure and urine uphill from gravitational movement).

PORTABLE NUTRITION

Many a child has been kept alive with milk and slaughtered animals en route to a new place. Whether the trip is flight from unsafe conditions or simply the search for a new place, animals can walk along with migrating humans. And if the humans need food, the animals offer it in real time, no refrigeration required.

DEMOCRATIC NUTRITION

Animals offer a level playing field for every stratum in society. The peasant can have the same nutrition as the king. The Eskimo can have the same health as the sultan. Tofu isn't everywhere, but animals are. Prohibiting animal consumption is ultimately an uncharitable and elitist position. Adding even one egg to the diet of many African children increases IQ several points. Ditto an ounce or two of meat.

HUMAN RESPONSIBILITIES AND OPPORTUNITIES

Animals are not human, and humans are not simply animals. Animals can't sin; they can only respond. God did not send a Savior to animals. The scientific amoral classification *homo sapiens* does a major philosophical disservice to the creation pedestal on which humans stand, with its concomitant responsibilities and opportunities. I've never seen big animals make way for smaller ones at a feed trough; all animals are bullies. They don't create culture with art, music, sports and literature. No, my friend, humans are not animals.

SENTIENCE

All nature is sentient. What we've discovered in recent years about the relationships and responses between fungus and trees is revolutionizing our historically simplistic assumptions about plant life. Sugar maples withhold sap in the spring when a wind comes, knowing that if a branch breaks it needs that sap to heal the broken branch wound. When the wind stops, the tree releases sap. When giraffes eat acacia trees, the trees emit pheromones that travel on the wind to alert neighbors, who then change their leaf chemical ratios to make them bitter and less tasty to the giraffes. If all of this isn't sentience, I don't know what is.

DEATH

Death is the precursor to life. Everything is eating and being eaten. If you don't believe that, go lie naked in your flower bed for three days and see what gets eaten. You cannot have life without death; this is perhaps one of the most profound principles in ecology and life. The life, death, decomposition and regeneration cycle illustrated elegantly in a compost pile is a wonderful object lesson of sacrifice and renewal. You can't have life without death.

WILD ANIMALS

What about wild animals? If no animal belongs on our plates, how do you suggest to deal with wild hogs? Exploding deer populations as hunting goes out of vogue are wreaking havoc with automobile insurance actuaries. Even urban sectors now routinely offer hunting lotteries to keep wildlife populations in check. In human history, we've never tried a "no hunting" experiment. Such a notion is truly aberrant.

DIVERSIFIED PASTURES

Pastures have far more life than crop fields. If you really want more life and more diversified beings fulfilling their niche in the cosmos, perennial multi-species pastures support far more critters than a mono-crop corn field. From birds to spiders to moles and grasshoppers, a prairie sward offers home and haven to exponentially more beings than a crop field. Let's choose life.

PET DIETS

What about canine pets? Some 25 percent of all meat consumed in the U.S. is eaten by dogs and cats. If animals don't belong on human plates for reasons that equate to slavery and oppression, how is it ethical to put them on our pets' plates? Is that not vicariously exhibiting the same issue? If you're killing animals in order to keep a pet dog, all the ethical arguments advanced for human prohibition apply to pets. Consistent ethics would then deny the use and ownership of therapy animals. Is this where you want to go in your thinking?

ANCILLARY PRODUCTS

From leather to cosmetics, soaps and pharmaceuticals, the massive list of animal-derived products goes far beyond the plate. If we need animals for all these things, what do we do with the rest of the carcass? And if we don't create an economic opportunity by eating the rest of the animal, what does that do to both price and availability of all these other beneficial products?

RECONNECTING

In the end, my position was how aberrant our debate was in light of history. The fact that Singer and I both lived in a culture with the stability and luxury to spend an hour discussing whether eating animals was ethical was in itself evidence that we live in unprecedented times. Throughout most of human history, our ancestors skated close to starvation. If they could catch something, trap it or shoot it, they could live another day.

This debate, in my view, does not illustrate a new awareness or an evolution in consciousness, but a profound devolution into extreme disconnection with our ecological umbilical and an overall decline into spiritual depravity. In your conversations defending the sacredness and importance of pastured livestock, be kind but firm, authentic and respectful. Now go pet your cows.

Joel Salatin and his family own Polyface Farms in Virginia's Shenandoah Valley. Author of fifteen books, he is editor of Stockman Grass Farmer magazine. This article is reprinted with permission (with slight edits) from Stockman Grass Farmer.

If you really want more life and more diversified beings fulfilling their niche in the cosmos, perennial multi-species pastures support far more critters than a mono-crop corn field.

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Legislative Updates 2022 IAFP MEETING: WHAT'S HAPPENING WITH BIG FOOD By Pete Kennedy, Esq.

The largest food safety conference in the world took place from July 31 to August 3 when the International Association for Food Protection (IAFP) held its annual meeting in Pittsburgh. IAFP's mission is "to provide food safety professionals worldwide with a forum to exchange information on protecting the food supply." More than three thousand professionals from government, industry, academia and nonprofits attended this year's meeting. The IAFP meeting is a window into what's coming down the pike with food, food safety and food regulation. Food safety professionals have a thankless job, investigating foodborne illness outbreaks involving foods that often have ingredients obtained from multiple countries, due to the globalization of the food supply.

Globalization and a continued decline in food quality and transparency have made it difficult for government and industry to bring down the number of foodborne illnesses. Frank Yiannis, Deputy Commissioner for Food Policy and Response of the U.S. Food and Drug Administration (FDA), noted in a regulatory update he gave at IAFP that the number of foodborne illnesses in the U.S. has been flat for two decades.

SALMONELLA IN POULTRY

A major topic at this year's meeting was the persistant problem of illness caused by salmonella in poultry. In a regulatory update she gave for the United States Department of Agriculture (USDA), Sandra Eskin, USDA Deputy Under Secretary for Food Safety, conceded that the department has consistently failed to meet public health goals with regard to salmonella in poultry. To deal with the salmonella issue, USDA implemented performance standards for poultry in 2015—testing requirements that disproportionately impacted small-scale USDA slaughter and processing establishments and were a factor in Texas terminating its state poultry inspection program. The performance standards led to fewer positive tests for salmonella in the facilities USDA regulates, but the number of illnesses attributed to salmonella in poultry—the bottom line in evaluating the effectiveness of that or any other food safety initiative—remained the same. USDA responded to its failure to make any progress by announcing on July 31 that it was establishing a zero tolerance standard for breaded poultry products, a first step in extending zero-tolerance to other poultry.

USDA-inspected poultry establishments commonly slaughter between two hundred thousand and three hundred thousand birds per day, a production level that makes quality control difficult to attain. Instead of imposing performance standards and zero tolerance, decentralization of poultry production would likely be more effective in reducing illness. Over fifty years ago, USDA's Food Safety Inspection Service (FSIS) issued a regulation allowing on-farm poultry processing of up to twenty thousand birds per year without an inspector present for slaughter and processing; the number of foodborne illness outbreaks attributed to producers operating under the exemption are few, if any.

FSMA RULES

The most alarming news at the IAFP meeting was the announcement by Yiannis that FDA will be issuing a final rule on food traceability in November for what the agency designates as "high risk foods." The proposed rule on food traceability, authorized by the Food Safety Modernization Act (FSMA), imposes extensive recordkeeping requirements; it even covers those who produce cottage foods in home kitchens and farmers who sell any of their pri-

USDAinspected poultry establishments commonly slaughter between two hundred thousand and three hundred thousand birds per day, a production level that makes quality control difficult to attain.

vate production to anyone other than the final consumer—the regulation could easily drive small-scale producers out of business. Unless the final rule is a substantial improvement on the proposed rule, the traceability regulation which should start going into effect next year represents the biggest threat FSMA has posed to the viability of small farmers and local artisans.

Another FSMA rule that was a focus of the meeting was the regulation on agricultural water ('ag water') used by produce growers; to say the ag water rules and the implementation of them are confusing would be an understatement. Rules on harvest and post-harvest agricultural water quality are going into effect in January 2023 for "very small business" January 2024 for "small business," and January 2023 for all other business. In July 2022, FDA issued a proposed rule for preharvest ag water; that rule will go into effect for very small business in two years and nine months, for small business in one year and nine months and for other business in nine months after the final rule for preharvest ag water goes into effect. The proposed rule will require producer farms to do a preharvest agricultural water assessment covering matters such as water source and location, animal impacts, biological soil amendments of animal origin, adjacent land activity, untreated human waste and environmental conditions.

One speaker at the meeting commented that the implementation of the ag water rules will be complex and that there will need to be training and retraining of the trainers teaching farmers how to get into compliance with the new regulations. A state regulator remarked that there is no way farmers and regulators will be ready to implement and enforce the harvest and post-harvest ag water requirements when they start going into effect. Another speaker noted that there are still numerous knowledge and data gaps in understanding exactly what FDA wants on the ag water requirements. The extensive monitoring and recordkeeping requirements of the ag water rules make it a potential threat to the viability of small and midsize growers. Both the food traceability and the ag water rules look to be ways to consolidate market share into fewer and fewer hands.

TECHNOLOGY

The traceability rule in particular is an opportunity for FDA to further roll out what it calls "The New Era of Smarter Food Safety," a campaign that "represents a new approach to food safety, leveraging technology and other tools to create a safer and more digital, traceable food system."² In his talk at the meeting, Yiannis told the audience to envision a future where all information on food (how it was produced, where it's available, etc.) is such that food can be traced in seconds. He encouraged the attendees to imagine buying foods "you can trust" at a store because you know everything about it. Yiannis stated that we are moving toward an age where everything will have a digital footprint and voice so that inspectors can monitor a food processing plant whenever they want, not just inspect once every five years. He warned, "Things are going to change dramatically in the years ahead."³

One technology that Yiannis favors is blockchain, a digital ledger that can be used to trace food from farm to fork. One presenter at the

IAFP meeting spoke about a Chinese blockchain product called GoGo Chicken. According to its manufacturer ZhongAn Technology, "All info related to the chicken can be verified in the blockchain."⁴ This includes "the chicken's age and location, how far it walks each day, air pollution, the quality of water it drinks, when it's quarantined, when it's slaughtered..." and more.⁴ According to Yiannis, hundreds of Chinese poultry farmers raising free-range organic birds are using the technology to combat fraud from factory farms that are also claiming their birds are free-range. The organic birds are tagged with an anklet "that tracks and reports every aspect of their lives."⁴

Another blockchain product, the IBM Food Trust, is a network used by over eighty brands. Consumers can use a QR code to determine the processor and the farmer of the food they are eating—a globalized virtual version of "know your farmer, know your food." Blockchain is being used for beef to determine whether the cattle are, in fact, grass-fed; it can detect other kinds of food fraud as well. A speaker at the conference indicated that blockchain could be a fit for the FDA traceability rule.

There are a number of potential downsides to blockchain. It is expensive and incredibly energy-consuming; one speaker conceded that there must be mass participation for blockchain to make sense. It is unclear how well blockchain protects the confidentiality of proprietary information. Cybersecurity could be another issue; one speaker said that there had been two hundred cyber attacks on food and agriculture and that the government was monitoring over forty groups for ransomware activities. Scalability could also be a problem with blockchain as the required data storage capacity of the technology is huge. Further, blockchain is immutable once data are entered into it and timestamped; incorrect data can't be rectified.

ARTIFICIAL INTELLIGENCE

Another technology in favor with government and industry is artificial intelligence (AI) defined at the meeting as "the ability of a digital computer or computer-controlled robots to perform tasks commonly associated with intelligent beings."⁵ One presenter at IAFP spoke of Industry 5.0. Another commented that AI has a big role in FDA's "New Era of Food Safety."

AI can be used to make decisions on the farm regarding seed selection, water content, soil selection and crop monitoring. In a food processing plant, AI can be used to remove defective products through optical sorting and through sensory smell and taste through an electronic nose (known as an enose) that would replace human noses in a production setting. The industry can also use AI for selection and analysis of components in food, to identify flavor and provide quality assurance for packaging. AI can be used for warehousing and storage, analysis of delivery routes, for maintenance and timely repairs of equipment. For sanitation, the future is robots doing the cleaning instead of humans; robots can be made sterile so the thought is that pathogens would be less likely to crop up in the plant. Moreover, AI has been used to evaluate workers' personal hygiene.

Aside from blockchain and AI, speakers at IAFP mentioned a number of other technological tools for food safety. There is facial recognition technology, which can be used for purposes ranging from determining when an individual came to and left a food processing plant on a particular day to how many people with a red shirt and black pants were in an area of the plant on a specific date. There is wearable vision technology with a remote or off-site assessor to direct an on-site inspector to potentially problematic areas of the plant. For the on-site inspector, there are body cameras used for a similar purpose. There are drones used to inspect silos or areas of a roof; there are temperature sensors to stay with the food product throughout its whole journey from the processing plant to the customer's home. It all adds up to expensive, broad-spectrum, 24/7 surveillance.

FOOD SAFETY PROBLEMS MULTIPLY

Despite whatever technologies government and industry use to improve food safety, the fact is that regulators have a myriad of problems to contend with. The breakdown in supply chains has led to conditions more conducive to food fraud, something that is common with foods like honey and olive oil. One speaker commented that with the breakdown in supply lines, it's all manufacturers can do to find the ingredients they need, much less verify them for authenticity.

Another challenge is foreign materials, such as metals, found in food products. According to one conference presenter, foreign materials are the number one reason for food recalls in the industry, surpassing allergens. Some plants have installed x-rays or metal detectors to deal with the issue. Another problem is the continually increasing antibiotic resistance in livestock and poultry. One speaker commented that surveillance for antimicrobial resistance is becoming increasingly common, with resources and costs being a challenge.

Nanoparticles in food are another threat to the safety of the food supply; recent articles in the media have covered the considerable number of food products that contain nanoparticles. A study displayed at the meeting found that currently used methods for washing produce did not get rid of silver nanoparticles in romaine lettuce. According to one of

the authors of the study, the silver nanoparticles accumulate in both the liver and kidneys.

As if regulators didn't have enough to contend with, the introduction of insects into the food supply is another food safety risk they will be taking on; categorization of insects as a food allergen is under consideration. In the meantime, the number of products on the market containing insects appears to be rapidly increasing; the authors of one study on edible insects, publicized at the meeting, used—among other products for their work—a trail mix containing black scorpions as an ingredient.

CONCLUSION

The best response to all the problems the industrial food system is suffering is to support the production and consumption of locally produced food. The digitization and massive overregulation in the industrial system is unlikely to reverse the deterioration in quality of conventional food nor to reverse the increasing lack of transparency of what is actually in the food. The answer isn't increasing regulation to the point it further consolidates the food industry; instead, it's deregulating locally produced food to increase its market share. There is no need to spend billions on transparency and traceability-those are already built into local food. More of being able to look the producer of your food in the eye-fewer QR codes to see who grew your favorite food five thousand miles away—is the path to improve nutrition, health and community.

Part of this article first appeared at Solari. com in "Surveillance and Centralization on the Menu."

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RAW MILK UPDATES by Pete Kennedy, Esq.

FEDERAL - RAW BUTTER BAN UPHELD BY APPELLATE COURT

On June 10, United States Court of Appeals for the District of Columbia Circuit upheld the FDA regulation prohibiting raw butter in interstate commerce; the regulation bans all raw dairy products from crossing state lines other than cheese aged sixty days. In its ruling the court affirmed a federal district court decision supporting FDA's denial of a citizen petition filed by California dairy farmer Mark McAfee and the Farm-to-Consumer Legal Defense Fund (FTCLDF) to lift the raw butter ban. The appellate court's ruling, in effect, gives the agency the power to ban a food in interstate commerce that has little or no history of making people sick. There wasn't a single foodborne illness outbreak definitively attributed to the consumption of commercially produced raw butter in the record before the court.

In ruling the way it did, the court authorized FDA to substitute its judgment for that of Congress on a matter Congress had specifically addressed. The federal regulation banning raw butter in interstate commerce conflicts with a statute in the federal Food, Drug and Cosmetic Act (FDCA) that does not require butter to be pasteurized. A separate statute in the FDCA mandates that "no definition and standard of identity and no standard of quality shall be established for…butter." The U.S. Supreme Court has held that a standard of identity exists for purposes of the FDCA, whenever the government, "by regulation, fixes the ingredients of any food" such that "a commodity cannot be introduced into interstate commerce which purports to be [that] food. . . unless [the food commodity] is comprised of the required ingredients." The regulation governing the interstate dairy ban provides, in part, "No person shall cause to be delivered into interstate commerce or shall sell, or otherwise distribute. . . any milk or milk product [e.g., butter]...unless... made from dairy ingredients that have all been pasteurized." FDA issued the regulation under the authority Congress granted the agency through the Public Health Service Act to regulate communicable disease.

In its opinion the court found that the purpose of the standard of identity requirement is to ensure that consumers know what they are buying; pasteurization is a safety measure—"FDA's public health regulatory authorities are distinct from and serve different purposes than and do not conflict with its standard of identity rules." The court's distinction ignores the Supreme Court ruling that for a food to be in compliance with its standard of identity it must contain the required ingredients. The federal regulation establishing the interstate raw dairy ban requires that the cream used to make butter be pasteurized; the federal statute defining butter does not have that requirement.

The U.S. Supreme Court recently held that the Environmental Protection Agency (EPA) exceeded the authority granted it by Congress when the EPA issued regulations concerning "climate change." The court has also struck down an order by the Centers for Disease Control and Prevention (CDC) issued under its power to regulate communicable disease to stay any conviction of residential tenants by landlords during the Covid crisis; in so doing, the court found that "regulations under this authority have generally been limited to quarantining infected individuals and prohibiting the import or sale of animals known to transmit disease."

It's time for the high court to end FDA's power grab to ban any food it wants, especially foods that make few, if any, people sick. Otherwise, an agency that willingly approved the sale of genetically modified foods and lab-grown meat will be in a stronger position to help grow the market for synthetic food, something that the agency's primary clients—the biotechnology and pharmaceutical industries—are both pushing for.

McAfee and FTCLDF are not appealing the ruling to the U.S. Supreme Court.

INFORMATION RESOURCE FOR WAPF MEMBERS

Consult with Pete Kennedy, Esq., on state laws, regulations and policies including food freedom legislation and issues related to 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.

NEW ZEALAND - PROSECUTION OF RAW MILK FARMERS CONTINUES

Prosecutions of New Zealand raw milk farmers continue; where it appeared that the government had initially filed criminal actions against nine different farmers, mostly for violations of the country's raw milk laws, that number has increased to as many as sixteen total. As far as is known, none of the cases has actually gone to trial. At least five farmers settled their cases by agreeing to pay fines; in two other court actions where the farmers had pled guilty to violations of the raw milk laws, judges discharged the cases without convictions. Of these seven farmers, only one remains in the business of selling raw milk for human consumption. (See *Wise Traditions*, Spring 2021 issue for more background.)

The catalyst for the prosecution against the dairies was the issuance of the 2015 Raw Milk for Sale to Consumer regulations (the "2015 regulations") by the New Zealand Ministry of Primary Industries (MPI). In addition to having to register with MPI, dairy farmers faced the following requirements:

- Having to sell the raw milk no more than thirty hours after the commencement of milking for the oldest milk in the lot. One farmer said the thirty-hour limit left him unable to bottle his Saturday and Sunday milkings.
- Requirement of a time and date stamp on each container of milk. This requirement alone cost dairies customers—having to set a "consume by" date of only four days after the commencement of milking for the oldest milk in the lot.
- Requirement to test milk for five different pathogens every ten days, a cost estimated to run about seven hundred fifty dollars per month.
- Farmers had to register each depot (drop-point) where they distributed milk. MPI did an audit of each depot twice the first year after registration and once every year thereafter at a cost to the farmer of twelve hundred dollars per audit.
- Any customer wanting to pick up milk at a depot had to register as a transport operator. There were even record-keeping requirements for individuals picking up milk for their own family.

Many farmers, believing that they would not be able to afford the cost of compliance with the new rules, distributed milk through contractual arrangements such as limited partnerships and herdshare agreements—arrangements they thought would exempt them from the new rules. When MPI saw that not many farms were registering, it launched a sting operation, "Operation Caravan," against the unregistered raw milk farmers leading to the ongoing criminal prosecutions.

Today there are few, if any, unregistered farms producing and distributing raw milk. The 2015 regulations were designed to put raw milk farmers out of business and have little to do with science and protecting the public health. For MPI, they have been a big success; shortly before the ministry issued the new regulations, there were upwards of two hundred dairies selling raw milk—today there are around twenty-five.

The best illustration of the absurdity of the government actions would be one of the farmers that had his case discharged after pleading guilty to one count of violating the raw milk regulations. A factor in the decision of the judge hearing the case was that the farmer was a long-time coach of underwater hockey in international competitions; the judge noted that a conviction could bar him from traveling to countries holding the competition. In his court opinion, the judge also pointed out that the farmer held the liquor license for a golf club of which he was the bar manager and that a conviction might affect the license.

An attorney representing one defendant could not find any evidence that any of the accused farmers had made anyone sick with the raw milk they had produced. Most of these farmers, whether or not they had to pay fines, owe tens of thousands of dollars in attorneys fees. WAPF will be setting up a fundraiser to help the accused farmers pay their legal expenses. It's a way to give back to those who provided healthy food for their communities and many of the two hundred fifty thousand New Zealand raw milk drinkers.

Healthy Baby Gallery



Brooks is grandson to long-time Front Royal chapter leader and conference chef Maureen Diaz, and son of Taylor and Sarah in Louisville, Kentucky. Here he is making bone broth. Brooks eats liver on sourdough crackers (preferring the liver and asking for more). He also loves raw milk and mango kefir soda. His mama is a member of WAPF and is enjoying learning more about real food, true nutrition and how to feed her family the very best foods possible!

A WAPF

family living in Germany celebrated the birth of their third baby boy in June. Mom stuck to a nutrient-dense diet and stayed in good shape throughout the pregnancy (sometimes biking nine miles a day even into the third trimester—the family does not own a car). She found it to be her smoothest pregnancy yet in terms of symptoms. Although born slightly premature, their sweet baby did fantastically and had no problems. He is exclusively breastfed and growing wonderfully. Mom continues to eat well and take her daily dose of cod liver oil, and the little guy loves riding in the bike trailer!





Veronica from Peru is beyond happy to announce the birth of her WAPF baby on September 8th. Mother and baby are happy and healthy thanks to the work of the WAPF where mom learned so much about giving truly nutritious foods to herself and her family—which is priceless now more than ever.

Local chapters help you find locally-grown organic and biodynamic vegetables, fruits and grains; and raw milk products, butter, eggs, chicken and meat from pasture-fed animals. They also represent the Weston A. Price Foundation at local fairs and conferences and may host cooking classes, potluck dinners and other activities to help you learn to integrate properly-prepared whole foods into your life. Local chapters may be able to put you in touch with health practitioners who share our philosophy and goals. **IMPORTANT WARNING:** This chapter list is meant for individuals to contact a local chapter for food sources and for small farms or food producers to contact chapters near them. It is not for use by vendors and marketers. If you use the chapter email addresses to promote a product, even a free product or giveaway, we will not allow your company to advertise in *Wise Traditions* journal nor exhibit at our conference.

COMMUNITY SUPPORT NEEDED

Shan Kendall (long-time chapter leader and member) lost her house in a fire. A fundraiser page was set up by friends for those who wish to help: https://givesendgo.com/ShanandDavid?utm_source=sharelink&utm_medium=copy_link&utm_campaign=ShanandDavid

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SAN FRANCISCO/EAST BAY, CALIFORNIA

The chapter had a successful potluck at an Oakland Hills homestead. Thirty-plus people showed up with delicious food and great spirits despite chilly weather. Forming a circle, joining hands and introducing ourselves before the meal helped

stimulate some lively conversations. And, as a sign of growing collaboration across organizations, a combined WAPF/

Children's Health Defense booth at the El Cerrito, CA Fourth of July festival hosted by Kris Homme (right). Also present: chapter leader Nori Hudson (left).



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A special thanks to the Ebert Family Farm for hosting one-hundred-plus members, family and friends for the Denver WAPF annual tour. We love our farmers and all they are doing!

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chapters.westonaprice.org/sandpointid/

WASHINGTON, DC

A lovely June day at Haines Point in DC. A three-weekold baby even joined in the festivities, which included stretching led by Stephanie Legarda (center). Also present: chapter leaders David Barbarisi and Hilda Labrada Gore (center) and new WAPF staffer Yolanda Hawthorne (3rd from left).



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NAPLES, FLORIDA A lovely and diverse group held the chapter's first meeting, with thirty-four adults and ten kids in attendance. The group met for four hours and plans to meet regularly.

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LOCAL CHAPTER BASIC REQUIREMENTS

- 1. Create a food resource list of organic or biodynamic produce, milk products from pasture-fed livestock (preferably raw), pasture-fed eggs and livestock and properly produced whole foods in your area.
- 2. Provide a contact phone number to be listed on the website and in our quarterly magazine.
- 3. Provide Weston A. Price Foundation materials to inquirers, and make available as appropriate in local health food stores, libraries and service organizations and to health care practitioners.
- 4. Provide a yearly report of your local chapter activities.
- 5. Be a member in good standing of the Weston A. Price Foundation.
- 6. Sign a contract on the use of the Weston A. Price Foundation name and trademark.

OPTIONAL ACTIVITIES

- 1. Maintain a list of local health care practitioners who support the Foundation's teachings regarding diet and health.
- 2. Represent the Foundation at local conferences and fairs.
- 3. Organize social gatherings, such as support groups and pot luck dinners, to present the Weston A. Price Foundation philosophy and materials.
- 4. Present seminars, workshops and/or cooking classes featuring speakers from the Weston A. Price Foundation, or local speakers who support the Foundation's goals and philosophy.
- 5. Represent the Weston A. Price Foundation philosophy and goals to local media, governments and lawmakers.
- 6. Lobby for the elimination of laws that restrict access to locally produced and processed food (such as pasteurization laws) or that limit health freedoms in any way.
- 7. Publish a simple newsletter containing information and announcements for local chapter members.
- 8. Work with schools to provide curriculum materials and training for classes in physical education, human development and home economics.
- 9. Help the Foundation find outlets for the sale of its quarterly magazine.

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FARM DAY IN OVID, NEW YORK

Stoltzfus Family Farms hosted a chapter farm day in Ovid, New York on August 31, 2022. It was a lovely and lively event with some forty participants from upstate New York enjoying the beautiful weather, the large barns, farm animals and lots of farm foods and delicious raw milk! Ithaca, New York chapter leader Joyce Campbell was there as a representative of WAPF. The group in the photo are ready to enjoy a wagon ride around the farm pulled by draft horses. Many thanks to Henry Stoltzfus for organizing the event.

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ROCHESTER, NEW YORK

The first in-person event in two years, a potluck on a beautiful summer's evening, with area farmers and a few families new to WAPF. The food was wonderful, the conversations engaging. Co-chapter leaders Jennifer Toth and Laura Villanti have planned a canning demonstration and an encore presentation of Laura's "Let Food Be Thy Medicine" workshop (presented at Wise Traditions 2021).



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EYRIE, PENNSYLVANIA

Chapter leader Anna Rachocki (left) organized a meet-and-greet at her establishment, Voodoo Brewery, attended by those involved in local food, farming and the healing arts. Excited attendees are eager to learn more and meet regularly!



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Alexandria: Janice Curtin (571) 235-4872 janicecurtin@gmail.com see local resources & Alana Sugar chapters.westonaprice.org/alexandriava/ Bedford County: Ben and Carly Coleman (434) 299-5193 mtnrunfarm@gmail.com Blacksburg: Kim Bears (540) 239-7496, kim.bears@generalmail.net wapfblacksburg.org Campbell County: Lisa Serapiglia homeandlifeabundantly@verizon.net Charlottesville: Robin Shirley robin@clubtbyh.com Danville: Bianca Klein-Breteler seasonbotanica@gmail.com, (843) 343-3848 Fairfax: Jane Kadish (917) 804-8375, jane.kadish@gmail.com & Florissa Reynoso, (703) 537-0964, westonpricefairfax@gmail.com, chapters.westonaprice.org/fairfaxva/ Floyd: Abigail Patterson (540) 589-6489 luv2event@gmail.com Front Royal area: Maureen S. Diaz (717) 253-0529 mamasfollies@gmail.com & Paul Frank Greater Richmond Area: Christina Sava rvawapf@gmail.com Hampton Roads: Laura Harrison (757) 589-8920, itsawonderfullife8@verizon.net Marshall: Leila Leoncavallo wapf.marshall@gmail.com, (540) 753-1334 Purcellville: Valerie Cury fotoner2@aol.com Rockbridge County: Emily Achin (540) 460-5417, shenandoahwellness@protonmail.com & Becky Almy (540) 462-6022, becky@owlmoonfarm.com Shenandoah County: Dustin Palmer (202) 322-9138, dustin1@uspalmers.com & Amy Palmer Stafford-Fredericksburg: Natasha Fields nefields3@gmail.com Staunton & Lexington: Susan Blasko (202) 230-3501, ntpconsultations@gmail.com & lsabel Bauer ibauer@yahoo.com Vienna: Amber Condry viennawapf@gmail.com Winchester/Frederick County: Amelia Martin (304) 288-1454 ameliamartin630@gmail.com

WASHINGTON

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CLEVELAND, TENNESSEE

LEFT: Chapter leader Pamela Watts and her son Bobby spread WAPF's wealth of information.

RIGHT: Recent chapter events include farm tours and even a chicken processing lesson!



International Chapters

Tacoma/Olympia: Rebeka Vairapandi rebeka@vairapandi.com

Whidbey Island: Roy Ozanne (360) 321-0566 royozanne@whidbey.net & Sandra Rodman (425) 214-2926 wholehealth@whidbey.com

WISCONSIN

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wildc115@gmail.com facebook.com/groups/1042122412592106/

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Stuart Town: Hal & Sally Harris 0268 468 261 merrimount@hotmail.com

Sydney - North West: Brenda Rogers 61 4097 74790, brenda@brendarogers.com.au

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BULGARIA

Sofia: Grigor Monovski +1 359.87.635.9838 wapf.sofia@gmail.com chapters.westonaprice.org/sofiabg/

CHAPTER RESOURCES

Resources for chapter leaders can be accessed at westonaprice.org/local-chapters/chapter-resources, including our trifold brochures in Word format, the chapter handbook, PowerPoint presentations, business cards and more.

The Weston A. Price Foundation currently has 423 local chapters: 353 serve the District of Columbia and every state in the U.S. except Mississippi and West Virginia and 70 serve 24 other countries!

LOCAL CHAPTER CHAT GROUP

Our chapter leaders have a wonderful secure platform to carry on our many beneficial discussions, developed by Jay Hamilton-Roth, the husband of one of our chapter leaders. We encourage all of our chapter leaders and co-leaders to join if interested in learning and growing as leaders and individuals as well. To join, please contact Maureen Diaz at: outreach@westonaprice.org.

International Chapters

CANADA

AB

Calgary: Susan Quirk (403) 483-4338 squirkx@icloud.com Edmonton: Elaine Doucette theherbalmama@gmail.com, chapters.westonaprice.org/edmontonab/ Olds: Rick Kohut (403) 507-5890, rick@healthstreet.ca, foodgenie.ca Peace Country: Peter & Mary Lundgard (780) 338-2934 plundgard@telus.net & Levke Eggers (780) 568-3805, levke@telusplanet.net

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MB

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CHARLOTTESVILLE, VIRGINIA

End-of-summer potluck at Critzer Family Farm, hosted by chapter leader Robin Shirley (front, 2nd from left) with guest Hilda Labrada Gore. Food included homemade goat cheese, elk and bison stew, duck eggs and butter cookies from *The Nourishing Traditions Cookbook for Children*.



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СО

Meadow Maid Foods, 100% grass-fed, grass-finished beef. On pasture year-round at the family ranch in WY. Production practices detailed on our website. Custom beef, Farmers markets, and food co-op in Fort Collins. meadowmaidfoods.com, (307) 534-2289.

Rafter W Ranch, Simla, CO. A family-owned ranch, practicing regenerative agriculture, bringing you nutrient-dense food. Our animals are **100% certified American Grass-fed**. Our beef is 30-day dry-aged. We also offer pasture-raised lamb and broiler chickens. Bones, offal (liver, tongue, oxtail, kidney, cheek, heart) and other choice cuts available. Bulk and piece orders. We are part of the Harvest Host. Pick-up locations along the Front Range and **NOW shipping** in CO. (719) 541-1002, rafterwranch.net.

FL

Beyond organic, regenerative family farm selling raw goat milk, yogurt, kefir and cheese locally in Lake County Florida, along with probiotic skincare using live cultured yogurt, extracts and herbs from our chemical-free farm. We ship our skincare products. www.farmercrafted.com farmercrafted@ gmail.com

Ecofarm Florida Diverse Earth & WAPF-Friendly Farm serving the Tampa Bay area. Patured water buffalo products, organically grown vegetables and seasonal fruits, edible container plants and trees. Farm buying club and produce available at two markets. ecofarmfl@yahoo.com, (813) 708-3179.

GA

Broad River Beef, LLC, tender, flavorful Angus beef, 100% grass-finished, toxin-free and mineral rich. Cuts you actually use available in sizes that actually fit in your refrigerator. Produced seasonally with nature. Delivery available from Atlanta through northeast Georgia. broadriverbeef.com, (706) 310-8060.

ID

Idaho Food Coop specializes in providing pasture raised meats and wild caught fish. Beef and lamb are grass finished and our poultry is pasture raised. Pastured meats, organs and bones are available. Pickup locations are located throughout southern Idaho. idahofoodcoop.com.

IL

Honeysuckle Farm, Morris, Illinois is a family-owned and operated small-scale, pasture-based farm. We offer pastured eggs, chicken, turkey, and pork, raw honey, syrup, and raw A2 milk. Locally milled non-GMO feed, antibiotic and chemical-free. Order on-

line at honeysucklefarm.net. (574) 323-7919.

IN

DEVON BEEF, 100% grass fed, no antibiotics, no growth hormones. Full cow, ½ cow or individual cuts from my ranch in St. Leon, Indiana. Pastured pork, 100% antibiotic free, fed minimum amount of organic corn, 100% outdoors on pasture and woods. All meat USDA inspected. Information on how we raise our beef and pork plus important health links at abundantgreenpastures.com or Mike at (513) 646-8739.

HILL N DALE, RED DEVON 100% grass fed beef, RED WATTLE non-gmo pork, ROBUST WHITE pastured chickens, BRONZE pastured turkeys. On Farm Store open six days a week, delivery available. 12683 South 300 East, North Manchester, IN (260) 578-7294.

MA

Many Hands Organic Farm in Barre, MA. All products certified organic and free range. Lard, pork, chicken and turkey stocks, pork, chicken, turkey and 26 weeks of CSA. No till, nutrient dense. mhof.net; (978) 355-2853; farm@mhof.net.

MD

Nick's Organic Farm, since 1979 offering quality products to Washington, DC, suburban MD, No. VA, Baltimore and Frederick areas. 100% grass-fed beef (no grain ever), pastured chicken, turkey, eggs. Using a regenerative 12 year crop rotation, we constantly move our livestock to fresh pastures to build our soils. Our animals receive only organic feed raised on our farm, no hormones, no antibiotics, no animal by-products, no GMOs. Beef and poultry liver, organ meats, fat, and bones, chicken/turkey feet, beef sausage and jerky. Hay, straw, poultry feeds, food grade grains, popcorn, stone ground heirloom commeal (301) 983-2167; nicksorganicfarm.com; nicksorganicfarm@ comcast.net. JOIN our mailing list to receive order forms and an invitation to our annual Buckeystown Farm Tour.

100% soy-free chicken, eggs, pork and beef. Chicken livers, chicken feet and heads. Bacon and sausage. Raw pet milk. Raw milk blue and cheddar cheese by cheesemaker Sally Fallon Morell. **Will ship** whole cheese wheels. Southern Maryland, within 1 hour of downtown Annapolis and Washington, DC. Saturday farm tours. Store open Thursday to Saturday 10-6 or by appointment. P. A. Bowen Farmstead, 15701 Doctor Bowen Road, Brandywine, MD. (301) 579-2727, pabowenfarmstead.com.

MN

Farm On Wheels offers animals raised green grass-fed & organic. USDA inspected. Nutrient-dense beef, lamb, chicken, eggs, turkey, goose, duck, and pork, no corn or soy or GMOs. Farmers Market year around in St. Paul, Prior Lake. Linda (507) 789-6679, farmonwheels.net, farm_on_wheels@ live.com.

NY

Dutch Meadows brings you the finest in highquality 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 f o @ d u t c h m e a d o w s f a r m . c o m – DutchMeadowsFarm.com.

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

ОН

COPIA FARM, Dan & Caitlin, Short drive from Columbus, Johnstown Ohio. Farm store open daily, 9 am-7 pm. Raw milk herdshares, grass-fed meats, pasture-raised eggs, organic produce, organic sourdough bread & more! Regenerative, GMO-free, organic, paleo. (614) 915-9269, CopiaOhio.com.

WANTED: PRIVATE MEMBERS to raise nutrient-dense grassfed food on our farm through herd share program. Raw milk. Beef. Pork. Lamb. Chicken. Turkey. Eggs. Vegetables. Honey. Members have access to a 1 mile hiking trail through the farm. For an appointment to visit the farm, write to Byler Family Farm 14912 CR 3, Frazeyburg, OH 43822.

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 sixteen delivery sites in Cincinnati. Farm and contact address is: Scott Richardson, STRG Herdshare 6851 Fair Ridge Road, Hillsboro, OH 45133-9548.

OR

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

Windy Acres is a raw milk dairy. It provides families with raw cheeses, Gouda, Jack, Jalapeno Jack, Tri Colored Peppercorn Jack, White Cheddar, Swiss (Jarisberg style), Feta, Camembert, etc. We make

hand-pressed butter, cream, yogurt, kefir, lamb, pork and beef. Grass-fed, raised without GMO or soy. (541) 613-5239 Windyacres26@gmail.com.

PA

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

GAP VIEW FARM MARKET Raw milk, raw milk cheese, cream butter, eggs, including duck eggs and fresh vegetables from our chemical free farm. Call (484) 667-1382 or visit our farm market in the heart of Lancaster County, PA at 5230 Newport Rd, Gap, PA 17527.

RAW CHEESES made from milk from our herd of 100% grass-fed A2A2 cows on our organically managed farms. **WE SHIP**. Oberholzer at Hilltop Meadow Farm. (570) 345-3305.

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

Raw milk cheese from our grass-fed Jerseys, made on our family farm with Celtic sea salt. Cows are fed no grains. Also grass-fed beef and pastured chickens, turkeys and eggs. All soy-free, no hormones or synthetics. Onfarm sales, **will ship cheese**. Wil-Ar Farm, Newville, PA (717) 776-6552.

SC

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

ΤN

Martin Family Farm - located between Knoxville and Chattanooga. Offers pastured pork, eggs, 100% grassfed lamb, pasture raised meat chickens, 100% grassfed - grassfinished beef, veal, and whole raw A2A2 milk from 100% grassfed Jerseys. Everything is organically raised in harmony with nature, and is sold at the farm. Contact address and farm location: Martin Family Farm 959 Co Rd 423, Athens, TN 37303.

VA

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

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

VT

Larson Farm RAW MILK for sale from our own certified organic, 100% grass-fed, verified A2A2 Jersey cows. Also, yogurt, butter, gelato, grass-fed beef from our farm, and other local products, including soy-free organic eggs. Close to the NY border, 1 hour from Saratoga Springs, 1.5 hours from Albany. We have Airbnb. Come visit our friendly cows, and learn about rotational grazing and land restoration! Larson Farm and Creamery, Wells, VT. Larsonfarmvermont@ gmail.com or (802) 645-1957. www.larson farmvt.com.

WY

Meadow Maid Foods, 100% grass-fed, grass-finished beef. On pasture year-round at the family ranch in Goshen County. Production practices detailed on our website. Custom beef, Cheyenne farmers markets and local delivery. (307) 534-2289, meadowmaidfoods.com!!

APPRENTICE/EMPLOYMENT

Farm Operator Position, Pahoa, Hawaii. Grass-fed beef. Tropical fruit. Offered: food produced on farm for personal consumption; furnished 2br house; off grid; cash income: share of fruit and flower sales. Essential: knowledge, experience. For details, brief introduction/bio and references to jamesweatherfordphd@gmail.com.

Praire foods is seeking a marketer. We are a group of plain select farmers currently growing and shipping Dairy beef pork chicken and eggs. We are seeking a dedicated individuel that is passonate about healthy food to create and manage a website for us 570 855 3715.

Successful retiring farmer seeking paid apprentice. Rural S. Oregon Cascades 100ac. forested/9-ac. pastured organic beef main operation. Very established customer base. Seek mature, responsible, teachable person with desire/willingness to learn. Basic Ag/ Husbandry is necessary but the willingness to learn is most important. Ongoing projects in construction, soil/pasture management, agronomy, large composting, husbandry, agriculture, irrigation, gardening, forest management, heavy equipment, mechanics, welding, etc. We try to do it all here. Looking for a long-term potential partnership. Opportunity of a lifetime. inforoc@posteo.net.

Vermont Raw Milk Business and Creamery seeks Manager. Larson Farm and Creamery selling raw organic milk and pasteurized dairy products from our 30-cow organic, verified 100% grass-fed A2A2 Jersey herd, seeks a Manager. Responsibilities include some production work and development, supervising employees and managing sales and marketing with a milk contract with the cow dairy. Potential for a successful manager to work into ownership of the creamery business. Housing possible. Possible dairy cow work for a second person. Contact: Larsonfarm vermont@gmail.com or (802) 645-1957. www.larsonfarmyt.com.

CRAFTS & CLOTHING

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

DVDS/ON-LINE VIDEOS

DVD "Nourishing Our Children" recently launched a DVD that may be used for one's self-education or to present to an audience. You will learn how to nourish rather than merely feed your family. nourishingourchildren.org/DVD-Wise.html Free shipping!

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

HEALTHY PRODUCTS

Beyond organic, regenerative family farm selling raw goat milk, yogurt, kefir and cheese locally in Lake County Florida, along with probiotic skincare using live cultured yogurt, extracts and herbs from our chemical-free farm. We ship our skincare products. www.farmercrafted.com farmercrafted@gmail.com.

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.

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A Restaurant Rating Guide

based on the dietary principles of the Weston A. Price Foundation

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Find Restaurants:

Going out to eat? Find a restaurant which uses the WAPF dietary principles.

Rate Restaurants:

Found a restaurant using our principles? It's easy to rate it on: <u>12spoons.com</u>



How We Rate Our Restaurants

Restaurants can earn up to 12 spoons; one spoon for each of the following criteria that are met.

- 1 Serves mostly fresh food prepared on site from scratch.
- 2 Offers some local, organic, or wild-caught food. 8
- 3 Offers some pastured meat, eggs, or dairy.
- 4 Serves some organ meats (liver, pate, sweetbreads, etc.).
- 5 Uses natural fats for cooking (butter, lard, tallow, duck fat, olive oil, etc.).
- 6 Makes bone broths/stocks for soups, stews, gravies, sauces.

- 7 Makes own seasoning mixes (no MSG or flavoring packets).
 - 8 Makes own salad dressings using olive oil or cold-pressed sesame oil.
- 9 Offers genuine sourdough bread.
- **10** Offers lacto-fermented beverages such as kombucha or kvass.
- 11 Offers lacto-fermented condiments.
- **12** Serves naturally sweetened desserts (using raw honey, maple syrup, date sugar, etc.).

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