



Wise Traditions



IN FOOD, FARMING AND THE HEALING ARTS

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President's Message

“What we need, Sally, is a legal defense fund for raw milk farmers, something like the Home School Legal Defense Fund.” The year was 2005 and the suggestion came from Valerie Cury, a board member of the Weston A. Price Foundation.

At that time, our Campaign for Real Milk was taking off. Raw milk availability was increasing, but so were cases of bureaucratic harassment. Our office began receiving calls from beleaguered farmers, accused of making people sick, or simply hampered by over-zealous application of the regulations. WAPF had no resources to help these folks—we were not set up to provide legal advice. Often I had them talk with attorney Pete Kennedy, who had compiled all the raw milk state laws for us. Pete was extremely helpful, but we needed more.

So I began asking every attorney I met—would they be willing to set up such a fund, and serve as the organization's legal counsel? After several negative answers, I met Gary Cox at a raw milk hearing in Ohio. Gary agreed and we were on our way! The Farm-to-Consumer Legal Defense Fund (FTCLDF) was born on July 4, 2007, with a big farm picnic at Jake Zook's farm in Christiana, Pennsylvania. That first year, WAPF footed the bill for expenses while the Fund got organized and their membership began to grow.

The whole idea was to level the playing field for small farmers, and the Fund has done that very well. Have you noticed that we no longer have much trouble from state regulators? They have backed off raw milk because they know they will have a fight if they cause trouble. Under the able leadership of Pete Kennedy, FTCLDF has helped us get closer to our goal—clean raw milk available to everyone in the U.S. When the Fund was set up, raw milk was available through sales, pet milk or cowshares in twenty-seven out of fifty states—now that number is forty-two, so only eight more states to go. And FTCLDF has worked to liberalize state laws that already allowed raw milk sales but were overly restrictive.

FTCLDF provides legal counsel for small farmers in so many ways. President Pete Kennedy helps farmers set up cowshare and herdshare agreements at the rate of two or three per week. The Fund has also defended small farms for the right to engage in direct sales of all farm products, fought for less restrictive zoning laws, and even helped farmers whose crops were ruined by pesticide overspray to get the compensation they deserve.

That is why I am asking you to turn to page 14 and read their appeal letter carefully. If you drink raw milk and consume farm-fresh products, you owe it to the Fund to support them by being a member, renewing your membership or donating to their important work. The future of food in this country depends on your support!



Letters



SPRING WATER

Norm LeMoine's feature on filthy water and filtration options really hit home. Especially the dizzying number of filtration options. Over the past eight years I've tried many with varying success. While spring water was mentioned as being one of healthiest waters you can consume, little information was given on how and where to procure.

There's a wonderful website, www.findaspring.com, that contains a Google map interface with locations of springs around the world. It's entirely user-driven, meaning health conscious folks like us add and update the various spring locations. If you're lucky enough, there's a spring not far from where you live. Thankfully, I was finally able to locate a spring near my home.

For those who don't have access to a spring, what do the water experts think about commercial spring waters such as Mountain Valley? While these are treated, it seems this is a better option than filtered toilet water replete with chemical additives that's delivered via ancient water piping, no matter how good the filter on the other end is.

An article exploring all of the benefits and properties of spring water is welcomed. Considering all the toxins and pollutants that bathe our planet, spring water that hasn't seen the light of day for hundreds or even thousands of years could be the one truly "clean" thing we can consume. I also trust mother nature's filtering and cleansing over anything manmade.

Ryan Carmody
Cement City, Michigan

THYROID MALFUNCTION

"Sewage in a Glass? Technologies for Cleaner, Safer Water" (Winter 2015) discusses the adverse health effects of chlorine and fluoride, but misses one adverse effect entirely: thyroid gland (mal)function! If you look at the periodic table you will find the halogen group (column) with fluorine, chlorine, bromine, and iodine. The laws of nature dictate that fluorine, chlorine and bromine will displace iodine in a chemical reaction.

Iodine is necessary in the body for the thyroid gland to work properly. The thyroid gland regulates metabolism; so maybe our weight problems aren't all due to calories. We're probably looking at a three-factor interaction as a cause of obesity: calories (sugar calories are probably the worst); metabolism (thyroid gland functioning and couch potato behavior); and fats (lowfat diets replacing fats in the diet with carbs, which is doubly bad because you need fats in the diet to lose weight).

Roger A. Wacek
Owatonna, Minnesota

LACTATION FAILURE

In "The Scandal of Infant Formula" (Fall 2015), I discussed infant formula—the past, present and future, and negative implications for the health of our children.

Today, lactation failure, or inability to breastfeed for whatever reason, is a common occurrence. Some physicians think formula is as good as breast milk so help may not be provided on that front. In addition, many of our mothers did not breastfeed so we have no role models.

Dr. Mary Enig, an expert and pioneer in the field of *trans* fats, tackled this problem in her book, *Know Your Fats* (2001). "Why is there so much lactation failure today?" she asks. In this section of the book (page 190), she explains that *trans* fats in the diet of the nursing mother translate into *trans* fats in the breast milk, which can decrease the overall level of fat in the milk. Nature intended that fat be the major component of breast milk.

Much of the fat quantity and quality of breast milk is related to diet. But some saturated fats are "must-haves" and so important that the body will make them in order to supply the baby if they are not supplied in the diet.

If the infant does not receive enough fat in the breast milk, she will not be satisfied, will cry and be fussy. "A typical parental response is then to feed formula, which in turn decreases milk production by the mother," said Dr. Enig, who advocated actively avoiding *trans* fats.

Trans fats are still used in foods in the U.S., especially snack foods, baked goods and the like. Even if not named on the label, they may still be lurking in that item. Studies show that removing *trans* fats from the food system has been helpful in European countries in reducing the amount that shows up in breast milk.

The entire text of "The Scandal of Infant Formula" can be found on the

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



Letters



WAPF website at <http://bit.ly/1PzfBld>.

Sylvia P. Onusic, PhD, CNS, LDN
University Research Associates
Portage, Pennsylvania

THE FRENCH PARADOX

On a recent episode of my podcast, “The Nutrition Heretic,” I was excited to interview a woman who had a phenomenal health and weight loss turnaround following the advice I had written in a little book called *Frenching Your Food*. Prior to reading my book, this woman had been bouncing back and forth with vegan and other diets that called for the removal of animal fats and other animal foods, calorie counting and all the usual gimmicks that deprive the body of nutrients. She did lose twenty-five pounds on those diets, but it took a whopping two years! And nobody noticed.

She decided to follow my diet to maintain her twenty-five-pound weight loss—adding back butter and other animal foods, working out less and following other strategies in the book. Two months later, she found she had lost an additional fifteen pounds completely by accident. This time, people began to take notice and some have even cautioned her that she was losing too much weight!

At almost fifty years old, she is finally able to enjoy her meals without guilt. In fact, she eats anything she wants and is thinner, looks younger and has more energy than before.

Frenching Your Food reveals the secrets to remaining (or getting) thin on such a heretical diet in a way that other books about French eating habits fail to grasp. It all starts with developing a better relationship with food. Don’t we

all deserve a healthier relationship with our food?

It’s time we put to rest the horribly flawed concept that the French live long, healthy lives and remain thin despite a diet that includes plenty of animal fats and organ meats. It would make more sense to admit that these foods contribute to the health of the French instead.

Adrienne Hew
Kamuela, Hawaii

VITAMINS FOR WARTS

In the 1970s The father of one of our employees went to the hospital to have surgery—he had many plantar warts. He was put on an IV and ten days later the warts were gone. After investigation we found the IV consisted mainly of vitamins A, E, and C.

Over the next forty years we suggested to more than twenty people to take 25,000 IU of vitamin A, 400 IU of vitamin E, and 2000-4000 of vitamin C daily. Every person reported favorable results except an Australian sheep shearer who was a big man and a hard worker. After six months he called me and said it wasn’t working. I told him to keep on and after an additional six months when he came to shear the sheep again, the warts were all gone. (Would a higher dose have shortened the duration of healing?)

Our neighbor had a wart problem. She always went to the doctor to have them frozen off and also burned off, but they always came back. I told her about her lack of vitamins but she did not do anything about it. So I took three bottles of these (good quality) vitamins and gave them to her. After seven days the warts got itchy and in ten days the warts disappeared.

Let us stop begging God to heal us and use the brain he gave us. Remember what God teaches: seek and you will find.

Ivan W. Martin
Millersburg, Pennsylvania

TEENS ON DRUGS

For years, my husband was a youth director and I was a volunteer at his side for just about everything. Together, the two of us chaperoned teenagers on trips all through the 1980s and 1990s. We took teens on weekend retreats, week-long camp trips, and overseas work trips.

At the beginning of any trip, we would collect the students’ permission slips before boarding the buses and then head on our way. I took a short break from youth work, but volunteered to chaperone a trip again in 2008. The contrast with previous trips I had taken was stark. Before the students could board the bus, they had to stop by a card table that the trip coordinator had set up. There she was collecting and organizing the students’ medications. My jaw dropped as I saw her gather baggie after baggie, filled with the drugs the teens were taking. And this was a middle school trip, with students ranging from twelve to fifteen years of age. We had one hundred twenty kids or so going on this particular trip and about twenty-five of them were on medications. The medications were for allergies, ADD, long-term illnesses and other conditions, and included antibiotics and antidepressants.

On the trip itself, my colleague kept careful track of dosages and the timing of passing them out. She seemed more like a nurse than a trip logistics



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coordinator. I had never seen anything like it ten years earlier. The teens back then were on nothing. Now, a shocking percentage of them were on one drug or another.

I'm grateful to the Foundation for its efforts in education for our children's sake. I am eager to see this disturbing trend reversed.

Hilda Labrada Gore, Chapter Leader
Washington, DC

A FAD?

The paleo diet may seem like a fad to some, but a number of the populations visited by Weston Price would have fit the paleo description to a tee. Although living grain-free or low-carb may not be for everyone, there are many conditions that respond to it beautifully. Cutting out all grains and sugar (but not dairy) halted my mother's lifelong crippling rheumatoid arthritis, asthma and even corrected her vision within just a few weeks. For me it resolved my agonizing periods due to endometriosis.

I had been following a mostly organic, gluten-free Weston Price type diet for years, but my period pain was just getting worse. It wasn't until I cut all grains and sugar that my health took a turn for the better. Don't be fooled by "paleo bars" which completely miss the point of the paleo principle. A paleo approach is just another tool in our arsenal for health.

Carmen Lyman
Kauai, Hawaii

While descriptions of the paleo diet vary, most versions are lacking in adequate levels of vitamins A, D and K, so do not fit the description of what Price found among primitive peoples.

And with few exceptions, the diets he described contained either grains or tubers. But everyone needs to determine individually a diet that works for him or her. For some people this means avoiding all grains, for others it may mean avoiding all dairy or even seafood.

GARDASIL TRAGEDY

Thank you for sharing the dangers of HPV vaccine. I read your article and these are my findings also. My daughter received a Gardasil vaccine in August 2014. Within ten minutes, as we were walking out of the exam room, she said she couldn't walk. She had an ataxic gait and her pupils were so dilated that her eyes were black.

I've been a RN for nineteen years and I am appalled that this information regarding adjuvants, deaths and adverse reactions had been kept from the teaching curriculum. Even though the doctor and nurse witnessed this event, they said nothing and remained quiet. It was seven months after that I discovered that the cause of her near death was this "safe and effective" vaccine.

Within ten days of receiving the vaccine our journey began—twenty ER visits via ambulance along with transfers to hospitals offering higher levels of care. I nearly lost my daughter by being tossed from doctor to doctor and prescription after prescription.

Diagnosis included unexplained tachycardia, POTS, dysautonomia and autoimmune dysfunction of unknown etiology. With my research and determination I found the cause and implemented an intensive course of vitamin supplements and detox. I removed all chemicals from our home and began a gluten-free diet of chemical-free foods.

My daughter improved. It was nearly a two-year recovery.

I began getting a tremendous amount of social media attention with my bold post of "Do vaccines cause autism?" I'm well known in my community as I have been in pharma and medical sales for the past fifteen years. I have gained much respect working alongside physicians and other health care personnel to assist with their patients. Needless to say, people knew this was not something I would make up.

Prior to the mandated Tdap booster, Menactra and HPV vaccine, my daughter was homecoming queen at her school. She was titled Ms. West Lauderdale for winning a beauty title pageant. She was an honor student, tutor, a leader for social clubs and captain of the dance competition team. After these vaccines her cognitive abilities began to decline, she developed symptoms of arthritis, unexplained tachycardia, hypotension decreasing to 60/40—to name just a few of the adverse effects. She then displayed hypersensitivity to sound to the extent that placing keys on a table caused a fight-or-flight response. She became like a ninety-year-old with Alzheimer's, rheumatoid arthritis, end-stage congestive heart failure, and was a hospice cancer patient candidate.

I'm a member of Mississippi Parents for Vaccine Rights and I am lobbying for some type of religious or philosophical exemption. In Mississippi our children must be injured from a vaccine before we can get some type of medical exemption. This process also is near impossible. In my community of approximately four hundred preteens and teens, approximately twenty have been affected not only by Gardasil but

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also from the Tdap booster mandated by our state in 2012.

I've been speaking out on social media for about a year. People are now paying attention. Legislatures are listening.

I felt I would share my story in hopes of saving a child's life. Feel free to contact me if I can help take the HPV vaccines off the market. These pharmaceutical companies need to be held accountable for their misleading information. This is fraud by any description.

Wanda Hughes, RN, Owner
Hughes Healthcare
Meridian, Mississippi

HOMEOPROPHYLAXIS

Thank you very much for covering the topic of vaccination in your Summer 2015 issue. I was especially happy to see the article on homeoprophylaxis (HP) and the publicity for the HP Worldwide Choice conference last fall.

As a longtime member of WAPF and a homeopath, I was also very grateful that WAPF sponsored that conference. I enjoyed meeting the Texas chapter leaders at that event and was happy to see the photo of the organizers and all the presenters featured in your latest issue.

I think WAPF members would like to know about another non-profit in North America focusing on homeoprophylaxis: Free and Healthy Children International. Founded in 2011, this organization is dedicated to research, education and access to HP and offers a program for childhood disease that is based on the work of Dr. Isaac Golden. FHCI trains homeopaths in North America and world-wide in this program and also in the use of HP for travel. Over six hundred children are enrolled in a study in the hopes of making HP part of the public health care model. Over one thousand children in total are enrolled in the FHCI

program. More information about Free and Healthy Children International and a directory of homeopaths certified in HP can be found at: freeandhealthychildren.org. Thanks again for being such a great resource for the community.

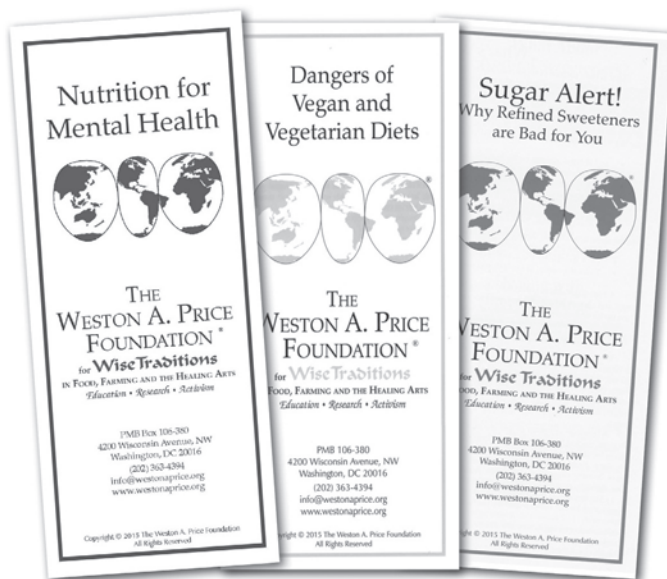
Deborah Landowne,
CCH, RSHom(NA), C.HP
San Rafael, California

COD LIVER OIL AND DEPRESSION

I am on parole after eight years in prison for a crime I didn't commit. As you can imagine, whenever I thought about my situation, I felt very depressed. Recently I started taking cod liver oil, and I have noticed that I don't think about my situation as much, and when I do, I don't feel depressed about it. So I would say that cod liver oil works very well for obsessive thoughts and depression.

Name withheld

THREE NEW WAPF TRIFOLDS!



DANGERS OF VEGAN AND VEGETARIAN DIETS
Includes Myths and Truths about Vegetarianism and Nutrient Deficiencies from Vegan and Vegetarian Diets

NUTRITION FOR MENTAL HEALTH
Includes Does Our Diet Affect Our Mental and Emotional Health?; Nutrient Deficiencies and Mental Health; Modern Diets and Mental Illness; and Side Effects of Drugs for Mental Illness.

SUGAR ALERT! WHY REFINED SWEETENERS ARE BAD FOR YOU
Includes What's Wrong with Sugar?; Low Blood Sugar; Diabetes; Diseases Caused by Sugar; What about Natural Sweeteners?; Dealing with Sugar Cravings; and Industrial Sweeteners.



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WAPF IN KENYA

As a result of WAPF's sponsorship of a teaching trip to Kenya, lots of good things are happening. My Maasai friend Dickson, who helped coordinate the trip, is the chairman of a local conservation group for a specific hill (small mountain) in their area. The Maasai want this preserved so that in times of drought, they have a place to graze their cattle and get water.

Recently UNESCO sponsored the workshop he attended which was about local conservation efforts for Maasai in Kenya and Tanzania. Dickson was invited to speak for thirty minutes because he's the chairman of their conservation group. About sixty people attended.

He spoke for twenty minutes about their conservation group and the last ten minutes on Weston Price and traditional diets. He made one hundred copies of the WAPF brochure to hand out. He told the workshop attendees that they will not be able to conserve the land if the people are sick. Actually, he said that the people must be conserved first so that they can then conserve the land. Then he spoke on the change in diet and why their people are sick and how they need to return to their traditional, God-given diets.

He said the response of the participants was amazing. They told him, "You should have been given the full time to talk to us about traditional diets, not just ten minutes."

There was a Kenyan university professor of commerce attending who found Dickson afterward and said he wanted to see the book Dickson had talked about (*Nutrition and Physical Degeneration*). I sent Dickson this book

a year and a half ago through a friend and that's what then sparked his asking for WAPF to send people to Kenya.

The professor gave Dickson bus fare so that Dickson could bring the book to him in Nairobi so he could borrow it for about a month. The professor was very interested in Price's book!

Dickson told me that he wanted everyone who came to Kenya to know that what he received from them, he is passing on and will keep passing on.

My family sent him a laptop last summer and he wanted me to know he's been so proud to have it and it has been very useful even for his work as chairman of the conservation group. Now, he is wondering whether there might be some type of projector so that WAPF pictures could be used in a presentation and shown on a wall. He said for those who are illiterate, the brochures aren't as useful as seeing the pictures would be. I think this is such good news!

Lisa Schnoor
Silver Spring, Maryland

The WAPF delegation led by Hilda Gore will return to Kenya in May, and we can certainly take a projector for Dickson to use!

EASY DELIVERY, HEALTHY BABY

It was 2006 when I first stumbled upon the WAPF website and the baby photo gallery, and started learning and changing my diet. I have been looking forward to writing this letter ever since.

After my wife and I decided to try for a baby, I fed her as much raw milk, butter, pastured eggs, bone broths, and occasional organ meats as she could stand. I also convinced her to take high-vitamin cod liver oil and butter oil,

along with folate, K₂, D₃, and collagen supplements.

She had an easy pregnancy—hardly any sickness (mild nausea but no vomiting)—and was still walking around the city even in late pregnancy. (Getting compliments from strangers like "Well, look at you strutting around all pregnant!") She was still doing housework and baking treats for my co-workers the day before the birth. The placenta was in a good location and the baby turned himself into an ideal launch position a few weeks before the birth.

A week before the due date, my wife's water broke early in the morning (4 am) and we went back to bed, intending to save energy because everybody warned us that labor would take many hours.

However the labor proceeded very quickly and we had to rush to the hospital in an ambulance. The baby was born at 10 am, without any meds or "assistance" such as vacuum or forceps. The nurses commented that such a speedy and easy delivery was rare. My wife described the birthing pain as "a six out of ten" and "easier than I expected." She came home the next day. She did not complain of any pain in the weeks after. We can't know whether this easy pregnancy and delivery was simply my wife's genetics, which I believe probably helped somewhat. It certainly gave me a lot of confidence knowing we were eating right, and I think my wife absorbed some of that.

Our baby boy is very cute, and his default mood is happy and alert. He does not cry except for good reason and after we address the cause, he settles down quickly. Mom's milk sup-



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ply was not enough so for a few weeks we supplemented with the WAPF cow milk formula and pumping. He likes the formula just as much as the real thing and gained weight very quickly with it (sometimes two ounces per day). His doctor said he had a perfect latch and was thriving.

I'm very grateful to the WAPF for providing the nutritional advice and formula recipe. There is no greater gift than a healthy baby!

Name withheld

GOITROGENS

Thank you for your link regarding anti-nutrients in certain vegetables. (westonaprice.org/health-topics/abcs-of-nutrition/vegetarianism-and-plant-foods/bearers-of-the-cross-crucifers-in-the-context-of-traditional-diets-and-modern-science/) I was unaware of the goitrogens these contain.

I now make the following observations: My wife's parents operated a market garden and her family easily consumed at least several servings of raw cabbage and cooked cauliflower per week. My mother-in-law was operated on for goiter in her early thirties and my wife has had Hashimoto's disease since about age forty.

My father has cultivated broccoli since I can remember, and we easily consumed several servings per week. He always enjoyed eating the raw stems, simply peeled. He too has been operated on for goiter and I have been hypothyroid since my early forties.

Name withheld

Another goitrogenic food is kale—the current darling of health gurus—eaten uncooked in smoothies and as kale

chips. Kale is also high in oxalic acid, which can cause stones in the kidneys and many other parts of the body. Cruciferous and high-oxalic foods should be eaten in moderation and always well cooked and with plenty of fat.

FERMENTED HERRING

Thank you for your article on fermented fish foods from around the world (Fall 2015). Northern Sweden still has a tradition of eating fermented herring—which is not the same as pickled.

Just yesterday my husband was looking at old photos from our friends' place in northern Sweden and came upon two photos of me with my friend Inga-Lena eating surströmming (literally translated “sour herring”) together with “almond potatoes,” chopped onion, tunnbröd (“thin bread” which is made with barley flour) and gräddfil (a fermented cream, kind of like crème fraîche). The addition of fresh parsley chewed afterwards freshens the breath. Notice, we are seated outside since nobody will open a can of surströmming inside the house as eating it inside makes the room smell too strongly. Eating this fermented fish in this way is a tradition for many in late summer. The cans, before being opened, are bulging outward from the gases produced by the fermentation.

You can find a description of the process for making surströmming on Wikipedia. There you can read: “The fermentation starts from a lactic acid enzyme in the spine of the fish, and so the fermentation is by autolysis; together with bacteria, pungent smelling acids are formed in the fish such as propionic acid, butyric acid and acetic

acid. Hydrogen sulfide is also produced. The salt raises the osmotic pressure of the brine above the zone where bacteria responsible for rotting (decomposition of proteins) can thrive and prevents decomposition of fish proteins into oligopeptides and amino acids. Instead the osmotic conditions enable *Haloanaerobium* bacteria to prosper and decompose the fish glycogen into organic acids, making it sour (acidic).”

Ingun Schneider

San Francisco, California
and Torekov, Sweden

DECLINING POPULATION?

I have been fighting alongside people of conscience for a vaccine-free New York City and world. It's certainly been a worthy fight but what if future children who we are trying to protect from vaccination are never even born? This is altogether likely!

The first indication I had of the reality of this supposition was when I realized that a vaccine mandated at birth in New York State (where I live), the vitamin K vaccine, contains polysorbate 80, a sterilization agent. It is the number one component in this vaccine!

The second indication, which also made me pause, was the fact that a pediatric professional society had indicated concern over one outcome from the HPV vaccine. Now there are innumerable reasons to object to this vaccine, since many of the girls who have received it are suffering and dying, but only one issue was being brought up, and it was “early ovarian failure” (early menopause). Why would the American College of Pediatricians be concerned about this lone issue? Simple: no babies, no business.



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One acquaintance told me that among three young women in her family who had been pregnant, there had been seven miscarriages and no live births. The woman said that all three of these would-be mothers received all the recommended vaccines on the CDC schedule plus three shots of the HPV vaccine. The young women are currently between the ages of twenty-five and twenty-seven, which means that the vaccine schedule they were administered would have been post-liability for the drug companies, so the dosage through the age of eighteen was at least twenty-four doses. Survival and fertility are lessening with each year as illustrated by the 2016 vaccine schedule of seventy-four doses through age eighteen.

I have been informed that instead of the world's population being at 7.4 billion and growing, it may be at 3.9 billion and diminishing. This seems

quite plausible to me, and to everyone else I have mentioned it to as well.

Sallie O. Elkordy
New York, New York

WAPF AND MAJOR HEALTH TRENDS

WAPF is to be commended for sticking to its scientific principles, even when they were not politically correct. Even though the Foundation often does not get credit, it has been the impetus for many health trends in the last fifteen years: *trans* fats banned; butter consumption growing; fermented foods now popular and available; kombucha now popular and available even in regular grocery stores; huge interest in bone broth; resurgence of coconut oil; soy foods in decline; cholesterol now declared OK to eat; raw milk demand growing and doctors recommending it; and many books on gut health and the connection between gut health and

mental illness.

Working quietly in the background, WAPF has had a huge influence on modern dietary trends!

Janice Curtin
Alexandria, Virginia

ACTIVIST STANCE

Thank you for everything you do at the Weston A. Price Foundation. I particularly enjoy the quarterly journal. Everything—from the letters to the editor to the ads—is worth reading. I often tell people I find information in the journal I find nowhere else.

I also appreciate the more activist stance the Foundation has taken in the past two years or so on issues that affect us all in this society and around the world, such as vaccinations and GMOs.

Gary Roush, Chapter Leader
Miami/Miami-Dade County, Florida



WAPF on the WEB

WEBSITE: Thank you for visiting our website and online ordering page! Please be sure to log in to order, renew or donate online. All the articles are free for anyone to read. We invite you to search all the tabs for volumes of information and ask that you tell others about our site: westonaprice.org.

TWITTER and FACEBOOK: twitter.com/WestonAPrice, facebook.com/westonaprice We have a Spanish language page, too: facebook.com/westonaprice.espanol We also have several campaigns, facebook.com/findrawmilk, facebook.com/nopinkslimeburger and facebook.com/soyalert, plus facebook.com/RedMeat4Health. Facebook is a wonderful outreach tool. Please be sensitive to newbies!

YOUTUBE & Flickr: youtube.com/TheWestonAPrice, flickr.com/photos/westonaprice

BLIP TV: westonaprice.blip.tv These are longer format videos such as our press conference on the USDA Dietary Guidelines and Farmageddon panel discussions.

BLOGS: See blogs by Chris Masterjohn, PhD at westonaprice.org/blogs. And see our realmilk.com/blog and realmilk.com/testimonials where you can read and share raw milk testimonials.

ALEXA WEBSITE RATINGS: westonaprice.org is rated number one among alternative nutrition websites at alexa.com (see alexa.com/topsites/category/Top/Health/Nutrition). Please visit the Alexa site and post a comment about our website. You can help raise our rating by visiting our website frequently and linking to it from your own website, Facebook page or blog.

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Caustic Commentary

Sally Fallon Morell takes on the Diet Dictocrats

HYPED-UP VIRUS PANIC

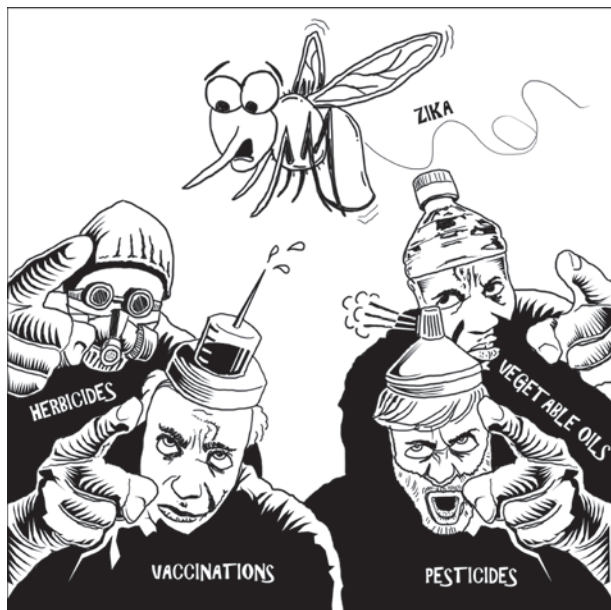
Every year, it seems, we are threatened by a new virus—often with a foreign or sinister-sounding name. Remember SARS? Ebola? The new threat comes from Zika, the accused villain for an epidemic of microcephaly (small headedness) in babies born in northeast Brazil. On February 1, 2016 the World Health Organization declared the Zika virus a “world health emergency” requiring a fast-track effort to develop a vaccine. Until now, the Zika virus did not seem to pose a danger to anyone. Discovered in Uganda in 1947, the hapless microbe causes mild symptoms of fever, rash, joint pain and conjunctivitis, lasting several days to a week. Now, all of a sudden, Zika is causing birth defects in thousands of babies. Media pundits take offense at the suggestion that other, more obvious agents are the cause: herbicides (especially RoundUp) used on GMO grains, the GMO grains themselves, genetically engineered mosquitoes, larvacides used to kill mosquitoes, and vaccinations mandated for pregnant women—women in northeast Brazil receive the Tdap vaccine during the twentieth week of pregnancy. It seems that only a small number of mothers in northeast Brazil whose children suffer birth defects have been exposed to the Zika virus, but the scare creates fear-based justification of more sinister programs. For example, Britain is requiring fumigation of passengers coming into the country from Brazil, and Cuba has embarked on heavy spraying of school rooms with pesticides. And it's not hard to predict what's coming next: mandatory Zika vaccinations for young and old to protect the unborn from the horrible fate of microcephaly.

LOW-CARB FOR DIABETICS

According to the *Journal of the American Medical Association*, 52 percent of American adults are diabetic or pre-diabetic. Before the discovery of insulin, the only recommendation for diabetics was a high-fat, high-protein, low-carb diet, based

on the observation that the body does not require insulin to process fat and protein. Once injectable insulin became available, that advice changed to a high-carb, lowfat diet, based on the spurious premise that fats (especially animal fats) caused heart disease. But the climate of opinion is changing, as evidenced by the popularity of a January 2015 article in

the journal *Nutrition*: “Dietary carbohydrate restriction as the first approach in diabetes management: Critical reviews and evidence base” (31(1):1-13), which has held the number one spot for downloads since publication. The authors—including WAPF member Ann Childers, MD—present major evidence for low-carbohydrate diets as the first approach for diabetes and demonstrate that such diets reliably reduce blood sugar levels and reduce or eliminate the need for medication. Dr. Childers credits the Weston A. Price Foundation for introducing her to the importance of



Cartoon by Richard Morris

animal fat in human diets.

A WARNING FROM RUSSIA

A report circulating in the Kremlin states that President Putin has issued orders that his people must be protected from GMO “food” and Western pharmaceuticals “at all costs.” According to Putin, human evolution is currently at “grave risk” with Western and global powers “intentionally decelerating the process for their personal gain.” Said Putin: “We as a species have the choice to continue to develop our bodies and brains in a healthy upward trajectory, or we can follow the Western example of recent decades and intentionally poison our population with genetically altered food, pharmaceuticals, vaccinations and fast food that should be classified as a dangerous, addictive drug. . . . We must fight this. A physically and intellectually disabled population is not in our interest.” Putin described the average Westerner as an “intensively vaccinated borderline autistic fat man slumped

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in front of a screen battling a high-fructose corn syrup comedown” (yournewswire.com/putin-human-evolution-under-threat-by-big-pharma-gmo-vaccines/).

LETTUCE OR BACON?

For years meat eaters have endured finger-wagging and guilt trips based on the assumption that meat production is bad for the environment and contributes to greenhouse gasses (GHG) and global warming. But a new study suggests that eating a vegetarian diet is more likely to contribute to climate change. According to research from Carnegie Mellon University, consumption of fruits, vegetables, dairy and seafood is more harmful to the environment because these foods have relatively high resources uses and GHG emissions per calorie. Published in *Environment Systems and Decisions* (March 2016: 36(1): 92-103), the study measured the changes in energy use, blue water footprint and GHG emissions associated with U.S. food consumption patterns. “Eating lettuce is over three times worse in greenhouse gas emissions than eating bacon,” said Paul Fischbeck, one of the study authors. “Lots of common vegetables require more resources per calorie than you would think. Eggplant, celery and cucumbers look particularly bad when compared to pork or chicken.” The authors did not study low-impact, pasture-

fed unprocessed dairy production, which would have a far lower impact than conventional confinement dairy subject to high-energy pasteurization processes.

WRONG ABOUT VEGANISM

On a similar note, George Monbiot, who argued in a 2002 *Guardian* article that veganism “is the only ethical response to what is arguably the world’s most urgent social justice issue,” has changed his mind after reading *Meat: A Benign Extravagance* (reviewed in *Wise Traditions*, Spring 2011). He notes that raising beef and pork using the right model—mostly pasture for beef and mostly waste (such as brewers waste, garbage and meat scraps) for pigs—greatly reduces the environmental impact. When we compare the amount of land required to grow meat with the land needed to grow plant products of the same nutritional value to humans—instead of citing a simple conversion rate of feed into meat—“the global average conversion ratio of useful plant food to useful meat is not 5:1 or 10:1 cited by almost everyone, but less than 2:1.” The claim that it requires 100,000 liters of water to produce a kilogram of beef is wrong by three orders of magnitude; it is based on the assumption that every drop of water that falls on a pasture disappears into the animals that graze it, never to re-emerge. Monbiot notes that, vegetable oils have

UPDATED SHOPPING GUIDE APP NOW AVAILABLE



We are very excited to announce an all new and greatly improved mobile app and website with store finder locations for all the products in the Shopping Guide!

The app has been submitted to iTunes as a new app with a slightly different name—“Find Real Food Locations”—instead of submitting it as an update to the old app (which hasn't been modified in two years). The existing subscribers who paid for the old app will be grandfathered into the new mobile app (and website), so they get an all-new mobile app at no extra fee until their subscription expires.

We are offering a thirty-day free trial for new users (website and mobile app). Once users sign up for a subscription, they can access the Shopping Guide via the mobile app or website using their same login. The icon has been updated along with the new app name to show that this app has maps and locations.

The new price is \$3.99 for six months and \$5.99 for twelve months (one dollar more than the prior app) because the app has more value now that we have GPS store

locations. An Android version is coming soon.

The store locations database is a big ongoing project. There are many hundreds of thousands of stores (and farms and Buying Clubs) that carry WAPF-approved foods/beverages. Our database is not complete but pretty good for starters. With your help, we will be updating and making the app current.

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a bigger footprint than animal fats and even vegan farming requires the large-scale killing of animals. “Guilt-free” animal production can be “low energy, low waste, just, diverse, small-scale”—something WAPF has advocated all along.

GROTESQUE GARDASIL CRUSADE

Not content with subjecting the blood of infants to toxic substances like mercury, aluminum and polysorbate 80, the pharmaceutical industry set its sights on tweens and teens in 2006 with the introduction of the Gardasil vaccine for human papillomavirus (HPV). Said to prevent genital warts in boys and girls, and subsequent cervical cancer in girls. Side effects from Gardasil and other HPV vaccines worldwide include three hundred ninety-seven reported deaths and almost eight thousand serious adverse effects—such as premature ovarian failure (lifelong infertility), multiple sclerosis-like symptoms, seizures, paralysis, memory loss and digestive disorders. One victim was Joel Gomez, a healthy fourteen-year-old boy who was found dead in his bed the day after his second Gardasil shot. A 2015 Japanese report, published in *Brain Nerve*, describes a “relatively high incidence of chronic limb pain, frequently complicated by violent, tremulous involuntary movements” along with “cognitive dysfunction” in Japanese girls after the HPV vaccination (2015 Jul;67(7):835-43). In January, the American College of Pediatricians called for a study on a possible link between premature ovarian failure and HPV vaccination. A report in *Vaccine* posted January 9 which described behavioral abnormalities in young female mice following administration of aluminum adjuvants and Gardasil, caused quite a stir. True to the spirit of scientific discourse, the publisher has removed the study from the Internet; this was followed by damage control in the form of a study in *Pediatrics*, posted February 22, claiming that HPV infection rates in teen girls and young women have declined due to the vaccine. What bothers Merck, makers of the vaccine, is the “low uptake”—only 40 percent of girls and 21 percent of boys have submitted to the jab. In order to up the rates and sell more vaccines, all sixty-nine of the National Cancer Institute’s centers are urging parents and health-care providers to complete the regimen by their thirteenth birthdays (*Washington Post*, January 28, 2016).

MORE ON THE VACCINATION FRONT

The U.S. Federal Vaccine Court awarded sixty-one million dollars to a child who will need complete, round-the-clock medical care following an adverse reaction to a DTaP immunization; researchers confirmed that a 2011 New York measles outbreak originated from a fully vaccinated woman—“Measles Mary” had no blood markers of immunity despite receiving two doses of the measles vaccine; an outbreak of influenza occurred among Navy crew members who were 100 percent vaccinated; legislators in California have requested a waiver in order to administer mercury-containing flu vaccines to pregnant women and children under three—only “preservative-free” vaccines can be given to children under three according to California law, and a shortage is resulting in “significant missed opportunities” for vaccination; parents are questioning vaccines as epilepsy rates rise to one in twenty children under five; and paramedics were called to a UK school when ten students keeled over after a meningitis vaccination. Undaunted, the FDA is preparing to fast track new vaccines targeting pregnant women.

PINK VIAGRA

For women suffering from the “disease” called hypoactive sexual desire disorder (HSDD), we have a pill for you. Produced by a heavily funded (to the tune of fifty million dollars) start-up called Sprout Pharmaceuticals, the drug received FDA approval in August 2015 after two previous rejections. (Two days after approval, Sprout was purchased by a subsidiary of Valeant Pharmaceuticals International for one billion dollars cash and a portion of future earnings.) According to Gary G. Kohls, MD, the drug is likely to be destructive of serotonin nerves if taken long term. Structurally similar to the weight-loss drug fenfluramine (or Fen-Phen), the new drug, called Addyi, may also cause serious cardiac side effects. Pre-approval trials were flimsy at best; one involved a study with sexually immature female rats who, after several weeks on the drugs, “appeared” to the observers to be sexually interested in male rats—but only after injections of synthetic estrogen and progesterone drugs! What to do if the libido has waned? First and foremost embrace an animal fat-rich diet to supply plentiful cholesterol and vitamin A—both needed to make sex hormones. Dr. Kohls also points out that many psychiatric drugs, including SSRI antidepressants,

Caustic Commentary

can dampen sex drive. Fortunately, those animal fats can help with depression too (www.metronidazole.org/2015/09/flibanserin-addyi-the-alleged-libido-pill-for-women.html).

SALT SAVES LIVES!

Patients with heart failure often leave the hospital with a warning to avoid salt. This advice could be deadly according to a new study. The researchers followed patients hospitalized for heart failure for three years. Those on sodium-restricted diets had a significantly higher risk of death or heart failure hospitalization compared to those who did not restrict salt (*JACC Heart Fail.* 2016 Jan;4(1):24-35). Salt is essential to life, including heart function—that is why we have salt taste buds on our tongue, to ensure that we put salt on our food.

FROM THE YOU'VE-GOT-TO-BE-KIDDING DEPARTMENT

Cattle burp and flatulate frequently, and when they do, they expel methane gas, the product of cellulose fermentation (whether it occurs inside the cow or on the ground or in wetlands). The process occurs—and has been occurring for thousands of years—whether or not cows populate the earth, but cows are the current scapegoat for these nasty greenhouse gas emissions. Not to worry, a solution is at hand! Scientists in New Zealand have developed a vaccine to reduce methane emissions for dairy and beef cows. According to Rick Pridmore, “strategy and investment leader for sustainability at Dairy NZ,” the development of a vaccine could mean a reduction in methane emissions from cows by between 25 and 30 percent. The vaccine works by targeting methanogens, the gut bacteria that produce methane. These methanogens are ubiquitous, so the vaccine could be used in herds worldwide. What a vision! Knock out the bacteria that animals throughout the world need to digest grass. Could there possibly be unintended consequences? Such a thought does not seem to have crossed the minds of the madmen developing the anti-methane vaccine (www.abc.net.au/news/2015-11-10/mitigating-methane-emissions-from-cattle-via-vaccine/6925676).

MCDONALD'S SWITCHING TO BUTTER!

McDonald's has announced it will use butter rather than liquid margarine on its Egg McMuffin and for cooking eggs.

The rollout will occur once locations deplete their supply of liquid margarine. This switch to real food follows other changes, such as increasing the size of the beef patties in its Quarter Pounder and using chicken and milk from animals raised without antibiotics. These changes represent an effort to boost sales in today's health-conscious market. In July, McDonald's announced second-quarter sales for the year had dropped 10 percent. The transition to butter will require an increase in dairy production by six hundred million pounds of milk per year—what a pity that the USDA and state departments of agriculture talked America's dairy farmers into lowfat-producing Holstein cows. Unfortunately, McDonald's has yet to make the most important and most health-supporting change: cooking the french fries in stable tallow instead of toxic vegetable oil.

PALEOATS

A key tenet of the paleo diet holds that our Paleolithic ancestors did not consume grains. But scientists have found evidence for grain consumption on an ancient grinding stone found in the Grotta Paglicci, Apulia, in southern Italy. The stone dates from the late Paleolithic era. Recovered in the 1950s, a team at the University of Florence in Italy recently studied the debris and found the oat fragments. The researchers determined that the people heated the grains before grinding them with the stone in order to preserve and prep them for processing. The resulting powder was then made into bread and oatmeal. In these pages, we have reported on grain cultivation among primitive peoples in California and Australia. It's a myth that our ancestors did not eat grain (<http://www.foxnews.com/science/2015/09/15/paleolithic-hunter-gatherers-loved-oatmeal-too.html>). ☯

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.

“This is the Maryland Department of Health and Mental Hygiene...please give me a call immediately in reference to your food operation, Grand View Farm.”



That's the voicemail that I listened to while making meat and egg deliveries to our customers for our small, Maryland farm.

It was a glorious autumn day, just a few months ago, right before the holidays: November 10th, 2015, at 12:28 p.m. Still driving our delivery truck, I prepared my thoughts a bit and returned his call. The government “official” told me that based on the pictures on our website, we were not in compliance with Health Department food facility standards and that he was going to shut us down.

This official was basing his actions on pictures from our website. He had no way of knowing our “facility” was covered, full of brand-new, professional poultry harvesting equipment and non-porous surfaces, intentionally positioned between a grove of trees and the barn to block the wind, and set up so that if there was a breeze, it blew from the “clean side” or finished side, to the “dirty side” or beginning of the harvesting process. But nevertheless, he was convinced that he was going to come to our farm to shut us down, especially because we had an open door policy and he would be there in an hour. I sternly explained to him that our open door policy applied to

everyone except him or anyone that he sent to represent him.

After this he knew he was in for more than he bargained for from us “simple” farmers. Now, I put on a good show on the phone, but if I told you that I wasn't scared, I'd be lying. Intimidated, never, but worried, for sure. For someone from the government to come at our farm and family out of nowhere, making threats and demands, is not something that I expected to have to contend with as a farmer!

My next call was to my business partner and father, Wil. We agreed that the next call was to the Farm-to-Consumer Legal Defense Fund (FTCLDF) emergency hotline, available to all FTCLDF members like us.

I can't explain to you the relief I felt from the time someone picked up the emergency hotline on the second ring. They answered, listened to me, and then told me to call lead attorney Pete Kennedy right away. Whoa! To have a team like that on my side, I felt like we were going into battle together!

Mr. Kennedy was so calm, clear and laid out a plan right away; it was extremely professional and deliberate. Over the next few days, Mr. Kennedy took over our cause, reaching out to the Maryland Health Department and standing shoulder to shoulder with our farm.

It was incredible. Working his seemingly legal magic, Mr. Kennedy forced the Health Department to back down in a matter of days, and we haven't heard from them again.

Now that we've been through it, we don't expect this to be the last time that something like this will happen with our farm. But if there is a next time, instead of fear we will only feel confidence, knowing that we have Pete Kennedy, John Moody and all of the good folks at the FTCLDF in our corner.

We choose to support the FTCLDF because they are exactly what our small farmers, processors, artisan producers, and consumers need, and they were there in our time of need with presence, professionalism, and power.

I encourage you—if you care about food produced with integrity—to support the FTCLDF today as we all work together to build a new, sustainable, and lasting food system.

Respectfully,
Nick & Wil Bailey, Grand View Farm

Your contribution helps farmers just like the Baileys at the most stressful time of their lives—when a government organization threatens to shut them down out of the blue—threatening their livelihood, their ability to provide for their family and their community that relies on them.

Each of us here at the Farm-to-Consumer Legal Defense Fund continues to work diligently to protect the farmers you love and rely on so that they can continue providing you with the food that heals your family and the land.

**Our organization counts on your support through memberships and donations.
You can donate today at farmtoconsumer.org/donate or use the form on the back of the next page.**

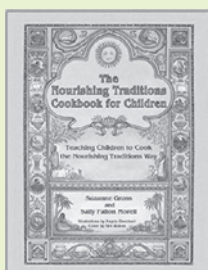
Our team is committed to keeping nutrient-dense food freely flowing in America. Your donation and support are what makes this possible. Our thanks to the Weston A. Price Foundation for asking you, its committed members, to put your money where your mouth is to protect our farmers and our food freedom.



**Farm-to-Consumer
Legal Defense Fund®**

2016 FTCLDF Appeal Gifts

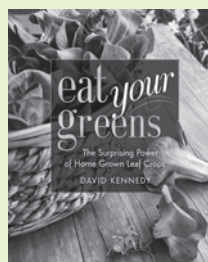
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The Nourishing Traditions Cookbook for Children: Teaching Children to Cook the Nourishing Traditions Way

By Suzanne Gross and Sally Fallon Morell

NT for Children provides children with the key messages of the parent book—the benefits of eggs, butter, bone broths and soups, lacto-fermented foods, meat and organ meats. Beautifully illustrated, the book teaches the basics of healthy cooking step by step. Children and their parents will enjoy lots of original recipes for healthy snacks, desserts, baked goods, lunches and breakfasts. *Spiral-bound, \$34 value – released May 15, 2015*



Eat Your Greens: The Surprising Power of Home Grown Leaf Crops

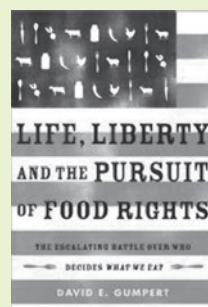
By David Kennedy

With more nutrients per calorie and square foot of growing space than any other food, leaf crops can be an invaluable addition to every yard or garden. This innovative guide shows how familiar garden plants can be grown to provide both nourishing leaves and protein-rich foods; introduces a variety of non-traditional alternatives readily adapted to local growing conditions; and explains how to improve your soil while getting plenty of vegetables by growing edible cover crops. *\$29.95 value – released October 2014*



Polyface YOU Workshop with Joel Salatin DVD Set

Get ready for a workshop filled with the wisdom and humor of the outrageous and outspoken Joel Salatin of Polyface Farms. Get an in-depth introduction to Polyface Farms and philosophy, strategies for success, and share in Joel's vision for an ideal farm-to-consumer food system. *3-DVD Set (5 hours of content), \$29.99 value – video-recorded November 2013*



Life, Liberty, and the Pursuit of Food Rights: The Escalating Battle Over Who Decides What We Eat

By David Gumpert

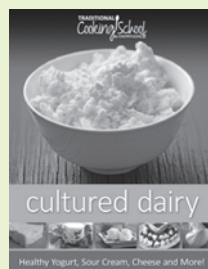
Do Americans have the right to privately obtain the foods of our choice from farmers in the same way our grandparents and great grandparents used to? *Softcover, 280 pages, \$20 value – released July 2013*

For each \$100 you donate, choose one of the below.



2014 Food Freedom Fest Conference DVD Set

Various speakers, including Joel Salatin, Martha Boneta, Jenny McGruther, Senator Frank Niceley, and more! Missed the first annual FTCLDF Food Freedom Fest Conference? Relive the memorable experience of learning from grassroots activists and small-farm-protecting politicians from across the nation. *3-DVD Set (5 hours of content), \$29.99 value – video-recorded September 2014*



Cultured Dairy and Basic Cheese eBook & Video Package

by Wardee Harmon from Traditional Cooking School

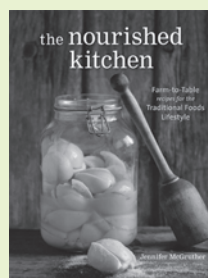
Learn how to make your own cultured dairy and simple cheeses. This package includes the 119-page, 19-lesson Cultured Dairy and Basic Cheese eBook in PDF format, plus 3 dairy culturing masterclass videos, and a bonus eBooklet "Chocolate Desserts". *Digital package, \$67 value*



The Raw Milk Answer Book: What You REALLY Need to Know About Our Most Controversial Food

By David Gumpert

This book raises more than 200 of the most difficult questions surrounding our most controversial food—the risk of getting seriously ill, whether it should be fed to children, the credibility of positive European research, how to handle family disputes over raw milk—and answers them in calm, non-ideological terms, understandable to beginners and experienced drinkers alike. *Paperback, \$14.95 value – released March 2, 2015*



The Nourished Kitchen: Farm-to-Table Recipes for the Traditional Foods Lifestyle

By Jenny McGruther

A cookbook featuring over 160 recipes based on the "traditional foods" philosophy of eating, which emphasizes whole grains, dairy, red meat, organ meats, and fermented foods. This book not only teaches how to prepare wholesome, nourishing foods, but also encourages a mindful approach to cooking and a celebration of old-world culinary traditions. *Paperback, 320 pages, \$27.99 value – released April 15, 2014*

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New members, please complete the questions below. For Affiliate Community membership, apply online or call 703-208-FARM(3276)

Membership Disclaimer

FTCLDF reserves the right not to approve any membership application and the right to revoke membership for cause, including, but not limited to, the misrepresentation of any information. If your application cannot be approved, we will return your payment along with a letter of explanation. FTCLDF does not provide legal representation for members in matters involving personal liability where those matters are unrelated to FTCLDF's mission statement. Consistent with the Internal Revenue Service regulations, FTCLDF cannot guarantee representation in every case and reserves the right to refuse or limit the scope of its representation in all cases. Membership fees paid to FTCLDF are not tax deductible as a charitable contribution. Consult with your tax advisor or attorney to determine whether membership fees paid to FTCLDF may be deductible as a business expense.

QUESTIONS FOR FARMERS, HOMESTEADERS, AND ARTISANS

Are you facing any legal issues with which you might need FTCLDF's help? ☐ Yes ☐ No If yes, explain on a separate page.

Do you use NATURAL, NON-TOXIC, SUSTAINABLE farming practices and/or food ingredients? (i.e., refrain from using herbicides, pesticides, GMO seeds/feeds; routine use of antibiotics, hormones; and following CAFO practices.) ☐ Yes ☐ No If no, please explain on a separate page.

QUESTIONS FOR FARMERS AND HOMESTEADERS

Do you use ten acres or less in your operation? (Note: use is not the same as own.) ☐ Yes ☐ No If no, please become a FARMER member.

Do your gross sales total less than \$15,000 for your farming/homesteading activities? ☐ Yes ☐ No If no, please become a FARMER member.

Do you sell or distribute raw milk? ☐ Yes ☐ No If yes, please become a FARMER member.

If yes, what kind of dairy? (check all that apply) ☐ Cow ☐ Goat ☐ Other (specify): _____

QUESTIONS FOR ARTISANS

Where is your food produced? ☐ Home Kitchen ☐ Commercial Kitchen ☐ On-Farm ☐ Other (specify): _____

How do you market your food? ☐ Internet ☐ Catering ☐ Retail Stores ☐ Food Co-op ☐ Farmers Markets ☐ Other (specify): _____

TOTAL MEMBERSHIP FEE AND DONATION \$ _____

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Folic Acid and Glyphosate: Synergistic Toxicity

Stephanie Seneff, PhD

Neural tube defects (NTDs), such as spina bifida, anencephaly and exencephaly, are severe birth defects that result from failure of neural folds closure during embryonic development.¹ While many factors may be involved in disrupting development in this way, it has been known since the 1970s that folate deficiency during the first trimester is a significant risk factor.²

As a consequence, the United States and many other countries have introduced laws to require fortification of certain staple foods with folic acid. In the U.S., in particular, a regulatory requirement was introduced in 1998 for wheat-based products to be fortified with folic acid and iron. Pregnant women are also encouraged to take folic acid supplements during the first trimester, which often continue throughout the pregnancy.

At first glance, this seems like a good idea, but the Europeans (aside from the British Isles) have steadfastly refused to adopt this requirement, despite pressures from the U.S. Is there a down side to folic acid supplementation? Do the Europeans know something that the U.S. government does not?

The folic acid supplement that's added to flour is a synthetic version of the natural B vitamin folate.

If you were paying attention, you noticed that I said “folate” deficiency and “folic acid” supplementation. Folate and folic acid are the same thing, right? Interchangeable. Wrong! I have seen research papers use these words interchangeably, but they are definitely not the same thing. The folic acid supplement that’s added to flour is a synthetic version of the B vitamin, which is oxidized and missing the methyl group. The active form of the vitamin is technically called methyltetrahydrofolate. Folic acid is much more stable, whereas folate easily breaks down with aging or with heat (as in baking the bread). Folic acid is a (cheaper) synthetic molecule whereas folate is natural.

According to the U.S. government’s Code of Federal Regulations, Title 21, Volume 2, fortified wheat products must contain 0.7 milligrams of folic acid and 20 milligrams of iron. This regulation became law in 1998, at a time when genetically modified (GM) RoundUp-Ready corn and soy crops had been on the market for a few years and were rapidly expanding market share. Correspondingly, glyphosate usage as an herbicide on these crops was also growing at an alarming rate. Glyphosate is the active ingredient in RoundUp, and the crops were engineered to be resistant to glyphosate’s toxicity through the insertion of a bacterial gene. The incidence of spina bifida was also increasing at that time, which is what alerted the government to a potential problem with folate deficiency.

One has to wonder whether somebody involved in the introduction of this law knew something about the potential of glyphosate to cause spina bifida. It would not take a rocket

scientist to think that disruption of the gut microbes that naturally produce folate for the host would lead to folate deficiency. In fact, it is a direct hit: folate is produced from products of the shikimate pathway, and this is the pathway that even Monsanto admits is disrupted in plants and microbes by glyphosate. Furthermore, the microbes that synthesize folate for the host, *Lactobacillus* and *Bifidobacteria*,³ are the ones that glyphosate preferentially kills.⁴ A continued rise in spina bifida would raise public awareness of a hidden environmental toxicant that might be causing this rise. Making sure that pregnant women were well supplied with external folic acid might mask the problem.

A definitive study from 1991 involving thirty-three centers in seven countries seemed to support the decision, suggesting a clear benefit from folic acid supplementation with little down side.⁶ A bold assumption in supplementing with folic acid rather than folate was that the gut microbes would take care of reducing folic acid to folate (adding two hydrogen atoms and reducing double bonds) and then adding the all-important methyl group, prior to its absorption into the blood stream. If this doesn’t happen, the folic acid is useless, and may even have toxic effects. Figure 1 shows the molecule for methyltetrahydrofolate with the methyl group and the four hydrogens circled.

A much more recent study, from 2014, suggests that this assumption was wrong.⁷ Through direct measurements of folic acid metabolites in the hepatic portal vein, they discovered that the human gut can methylate folate but it can’t efficiently reduce folic acid, a step that is neces-

THE METHYLATION PATHWAY OR THE ONE-CARBON CYCLE

Carbon is one of the basic elements in the periodic table and the core building block of living systems (carbon-based life forms). Methane gas is one of the simplest carbon-based molecules, containing a single carbon atom bound to four hydrogen atoms. A methyl group is essentially a methane molecule that's missing one hydrogen: it is a constituent of a larger molecule where the displaced hydrogen atom has been substituted by a biological molecule that has thus become “methylated.” The “methylation pathway” is the biological pathway by which a methyl group is passed around from one molecule to another—usually from glycine or betaine to tetrahydrofolate to homocysteine—to finally produce methionine. Methionine then becomes a “methyl source,” as it can donate its methyl group to multiple types of biologically important molecules, such as to various proteins (protein methylation) or to DNA molecules (DNA methylation). DNA methylation is an epigenetic process that can turn on or off the expression of various genes. DNA methylation is an important component of embryonic development. The entire biological pathway from glycine/betaine to methyl folate to methionine and finally to protein and DNA methylation is referred to as the “methylation pathway” or the “one-carbon cycle/pathway.”

sary prior to methylation. This means that the unreduced and unmethylated folic acid makes its way to the liver, which then is tasked with both reducing it and methylating it. This costs the liver dearly, both in antioxidant capacity and in methylation capacity. In fact, it can be expected to drive the liver toward a hyperoxidized state, with a high ratio of oxidized-to-reduced glutathione and a depletion of an important compound called nicotinamide adenine dinucleotide phosphate (NADPH) and methionine, all of which lead to liver stress. Unfortunately, glyphosate does all of these things in the liver as well.⁸

In a study comparing three hundred sixty autistic children to two hundred five controls, it was found that children with autism had a high ratio of oxidized-to-reduced glutathione in the blood, indicating impaired antioxidant capacity, along with low serum methionine, and a low ratio of methionine to homocysteine, a direct indicator of low methylation capacity.⁵ In other words, these children exhibited features you would expect from toxic exposure of the liver to excess amounts of both folic acid and glyphosate.

FOLIC ACID, FOLATE AND CANCER

Folate is intimately involved in the complex biological pathways that maintain S-adenosyl-methionine, the universal methyl donor, and it also feeds into the synthesis of purine and thymidine units in DNA and RNA. The one-carbon metabolic pathway (one-carbon = the methyl group), mediated by folate, plays a vital role in hemoglobin synthesis and DNA synthe-

sis, repair and methylation.⁹ For these reasons, it is generally believed that a diet high in folate should be protective against cancer, which arises from DNA mutations. In particular, there is a fairly compelling case for folate being protective against colorectal cancer (CRC).¹⁰ Folate may also be protective against breast cancer and uterine cancer.¹¹

Given the above, one would expect that folic acid supplementation would decrease the incidence of colorectal cancer. Ironically, epidemiological data in both the U.S. and Canada showed an increase in the incidence of colorectal cancer beginning when folic acid fortification in wheat-based products became mandatory.¹² These authors wrote in the abstract: "We therefore hypothesize that the institution of folic acid fortification may have been wholly or partly responsible for the observed increase in CRC rates in the mid-1990s."

A study by Troen and others confirmed that unmodified and therefore inactive folic acid was present in the blood among 78 percent of one hundred five post-menopausal women.¹³ Over half of them were taking a folic acid supplement daily. The study found that the ability of natural killer cells to destroy neoplastic (potentially cancerous) cells was reduced when folic acid levels were elevated. What is probably happening is that the inactive folic acid is binding to the folate receptors and preventing access by the methyltetrahydrofolate. This gives a hint as to how excess folic acid might increase risk to cancer: by getting in the way!

(Methyltetrahydro) folate protects from cancer by preventing DNA mutations, which

There is an increasing concern that the widespread practice of folic acid fortification of foods is leading to over-consumption of folic acid.

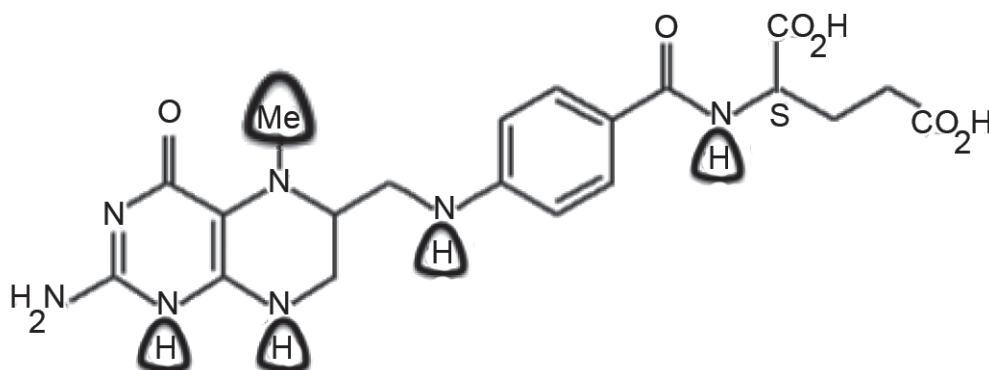


Figure 1: The methyltetrahydrofolate molecule, with the four hydrogens and the methyl group circled for clarity.

can turn off cancer-protective genes and cause cells to start proliferating uncontrollably. However, folate also *fuels* proliferation, because it is necessary for the synthesis of certain DNA nucleotides. Once you have a cancer growing, folate will encourage the cancer to grow bigger. Part of the chemotherapy program used to treat cancer involves anti-folate drugs: drugs that interfere with folate signaling.¹⁴⁻¹⁷ While these drugs prevent growth of the existing tumor, they also encourage further DNA mutations, which could lead to metastasis from the tumor, and it will also cause an increased risk of new cancers.

A randomized placebo-controlled trial intended to test the potential benefit of folic acid supplements in colon cancer showed instead that people with a history of colorectal adenomas had an increased risk of a more severe recurrence if they took 1 mg folic acid per day.¹⁸ Another paper showed that oral folic acid supplements increase the risk of prostate cancer. Meanwhile, anti-folate chemotherapy treatments are being widely administered to actively reduce the bioavailability of folate, which has been shown to fuel cancer growth, for both breast cancer and non-Hodgkin's lymphoma.¹⁴⁻¹⁷

HOW MUCH IS TOO MUCH?

On top of the folic acid that is present as fortification of flour, bread and pasta, about 30-40 percent of North Americans also take folic acid supplements. And supplements are usually recommended during pregnancy, with a disregard for potential toxicity. There is an increasing concern that the widespread practice of folic acid fortification is leading to an over-consumption of folic acid. A study of four healthy adult volun-

teers involved administering folic-acid-enriched bread and then analyzing for the presence of synthetic unmodified folic acid in the blood. Serum folic acid was found in all subjects at all doses tested.¹⁹

In an experiment to test the effects of folic acid on mammary tumors in female Sprague-Dawley rats, rats with tumors were randomized to receive a diet containing varying amounts of folic acid supplements, for up to twelve weeks, and the growth of their tumors was monitored.²⁰ Folic acid supplementation at all levels significantly promoted the progression of mammary tumors, with increases in both weight and volume compared to the control diet without any supplement. These authors wrote: "This is a critically important issue because breast cancer patients and survivors in North America are likely exposed to high levels of folic acid owing to folic acid fortification and widespread supplemental use after cancer diagnosis."

GLYPHOSATE AND NEURAL TUBE DEFECTS

I have claimed that glyphosate causes neural tube defects. Is there any evidence that this

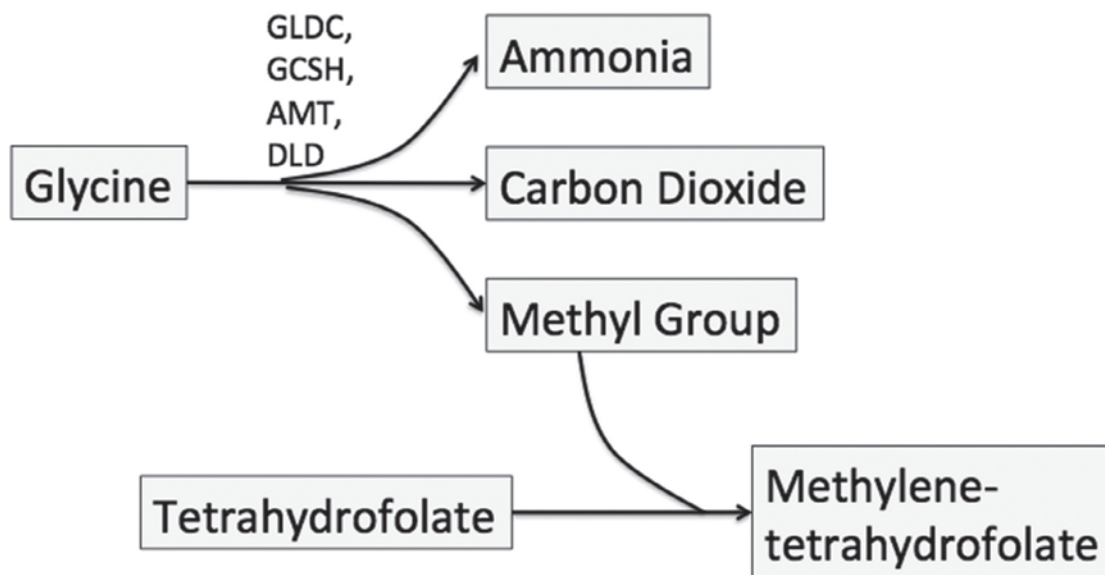


Figure 2: Simple schematic of biological pathways by which glycine is stripped of a methyl group to methylate tetrahydrofolate, which then provides methyl groups to other biologically important molecules. GLDC, GCSH, AMT, and DLD are all enzymes involved in the metabolism of glycine.

is true? Fifty-two cases of malformations in the offspring of pregnant women exposed to agrochemicals included anencephaly, microcephaly, facial defects, myelomeningocele, cleft palate, ear malformations, polydactily and syndactily.²¹ Of course, they were exposed to many different chemicals, so it is not possible to place the blame on glyphosate without more direct evidence of glyphosate's ability to induce these problems.

The U.S. Centers for Disease Control have reported on an excessive number of anencephaly births in Tacoma, Washington, at four times the national average rate.²² This increase coincided with a large increase in the use of glyphosate to control waterway weeds. Alarming trends of increases in birth defects such as microcephaly, anencephaly, cleft palates and other facial defects have occurred in regions of South America and Paraguay where glyphosate is used extensively on core crops.^{21, 23} Recently, an epidemic in microcephaly was reported in northern Brazil, where GM RoundUp-Ready corn and soy crops are a major export commodity. While this increase is being attributed to the Zika virus, glyphosate may well be a contributing factor. An investigation of forty-nine deaths linked only five of the cases directly to Zika virus, leaving much room for alternative explanations.²⁴

A study on tadpoles, specifically focusing on glyphosate formulations, conducted by Carrasco and others,²⁵ showed similar defects, including a reduction in head size, cyclopia (only one eye), reduction of the neural crest territory at neurula stages and craniofacial malformations. These defects occurred upon exposure to minute amounts of glyphosate: dilutions of 1/500,000 produced developmental abnormalities in 17 percent of the embryos. They suggested that the mechanism might involve over-production of retinoic acid, which is a known teratogen. This makes sense, because retinoic acid is broken down in the liver by cytochrome P450 enzymes, which glyphosate disrupts.⁸

However, I believe that there may be more to the story than retinoic acid, and more than glyphosate's disruption of folate synthesis by gut microbes. This has to do with glyphosate's potential disruption of the folate one-carbon cycle, due directly to suppression of glycine metabolism. Glyphosate is a synthetic amino

acid, an analogue of glycine. Hiding inside the glyphosate molecule is a glycine molecule, and there is potential for protein-making machinery to get confused and place glyphosate instead of glycine when constructing a brand new protein according to a DNA code for glycine. As we will see in the next section, there are multiple ways that glyphosate could mess up the machinery that produces the one-carbon (methyl group) that feeds into the one-carbon cycle.

GLYPHOSATE AND GLDC

Glycine decarboxylase (GLDC) is likely an enzyme you have never heard of. However, its importance for one-carbon metabolism is nonpareil. This is how you link impaired glycine metabolism directly to folate deficiency and neural tube defects, as well as to autism.

The chemistry involved is not completely straightforward, but it is not too hard to grasp. Figure 2 schematizes the most important parts. First of all, glycine, as one of the twenty-two amino acids that are building blocks of proteins, is nonetheless toxic to microbes and to human cells if it is present in too high concentrations as a free amino acid in the environment. The gut microbes normally metabolize glycine, using GLDC, among other enzymes, to carbon dioxide, ammonia and a methyl group. The methyl group is very important, because it feeds into folate one-carbon metabolism; that is, it methylates tetrahydrofolate.

An elegant and compelling study by researchers in London, published in 2015, goes a long way toward explaining how glyphosate could lead to both spina bifida and autism, without, however, ever mentioning glyphosate.²⁶ If GLDC isn't working, two problems quickly arise: glycine toxicity and a deficiency in the supply of methyl groups. A mutation in GLDC, if inherited from both parents, causes a rare disease called non-ketotic hyperglycinemia (hyperglycinemia standing for high glycine). This enzyme has also shown up as a mutation linked to neural tube defects, in both mice and humans.²⁷ The focus of the London study was to explain how these very different outcomes could arise from the same defect. What they found was that mice engineered to have defective GLDC genes inherited from both parents fell into two

Alarming trends of increases in birth defects such as microcephaly, anencephaly, cleft palates and other facial defects have been found in regions of South America and Paraguay where glyphosate is used extensively on core crops.

distinct groups: those whose neural tubes failed to close (and this group didn't survive long after birth) and those who were relatively spared but suffered from hyperglycinemia during their entire lifespan.

Mice that were homozygous for the defective gene (meaning that the copies of this gene inherited from both parents were defective) did not fare well. Half of them developed hydrocephalus (water on the brain) with evident brain swelling and dramatic enlargement of the ventricles in the brain (which house the cerebrospinal fluid). These mice all died within the first twelve weeks of life. Some of the embryos displayed exencephaly, a brain defect whereby neural tissue bulges from the brain. Others had strikingly enlarged ventricles, even prenatally. Autism, attention-deficit hyperactivity disorder (ADHD), and schizophrenia have all been linked to enlargement of the ventricles in the brain,²⁸ although fortunately these individuals don't suffer from the more severe defects observed with the double gene mutation.

Glyphosate could disrupt glycine decarboxylase in at least two ways. One is through displacing glycine as substrate. Glyphosate has been shown to disrupt other enzymes that have glycine as substrate, such as the rate-limiting enzyme in the synthesis of the pyrrole ring, a building block of cobalamin and hemoglobin. But another possibility is more insidious: insertion into the amino acid chain in place of glycine at a location where glycine is essential for proper function of the protein. A glycine-rich region is very near the active site of glycine decarboxylase, and it maintains the shape and flexibility of the active site.²⁹ Glycine is a very special amino acid because, unlike all the others, it has no side chains. This makes it tiny and flexible, and proteins have taken advantage by putting glycine residues where flexibility is needed. Substitution of glyphosate for any of the glycines in this region is likely to impair enzyme function. This would be true regardless of the gene variant, and

therefore has little to do with genetics. Glyphosate could thus suppress the activity of glycine decarboxylase by inserting itself into the protein in place of glycine, and this could cause effects that mimic, but to a lesser degree, the pathology of the homozygous mice.

An interesting observation from the London study was that the female mice were more susceptible to neural tube closure problems than the male mice. This might be part of the explanation for the skew of autism toward males. Affected females are more likely to be "weeded out" early on due to life-threatening defects, probably often manifested as a spontaneous abortion early in the pregnancy.

The London authors found that GLDC is intensely expressed in the neural tube during its development, and that this enzyme is required for neural tube closure, and beyond, during brain development.²⁶ By examining the timing of events in embryos with the genetic defect compared to normal mice, the authors noted that neural tube closure was delayed in the defective mice, along with delayed development in general. In some cases it never closed, but, if it did succeed in closing, then the pressure built up due to accumulating fluids, resulting in hydrocephaly and exencephaly. They also confirmed, as expected, that the defective mice had

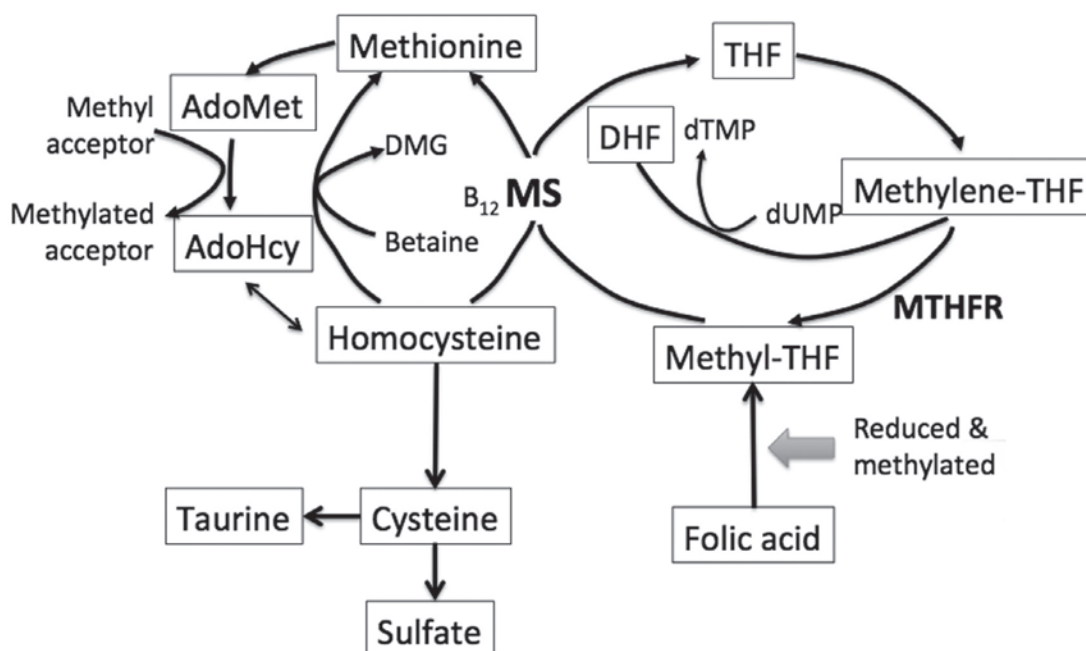


Figure 3: Simplified schematic of the methylation pathways. AdoHcy: adenosylhomocysteine; AdoMet: adenosylmethionine; DHF: dihydrofolate; DMG: dimethylglycine; MS: methionine synthase; MTHFR: methylenetetrahydrofolate reductase; THF: tetrahydrofolate. Adapted from Figure 1 in Refsum, 2001.³⁵

a reduced supply of methylene tetrahydrofolate, the immediate precursor to methyltetrahydrofolate, as can be anticipated by examining Figure 3.

Previous research from a subset of these authors had shown that maternal folate deficiency alone can induce neural tube defects in the offspring.^{30, 31} It is interesting to note that it was not enough to simply remove dietary folate from the mouse dams. They also had to expose them to antibiotics in order to remove folate-synthesizing gut microbes, beginning even before the dams were mated. This makes it very clear that our gut microbes supply important amounts of folate under normal circumstances, and this supply is at risk if they are chronically exposed to glyphosate, a patented anti-microbial agent.

CEREBRAL FOLATE DEFICIENCY

Cerebral folate deficiency (CFD) is defined as a condition where the serum levels of folate appear to be fine, but the levels in the cerebrospinal fluid are low, leading to deficiencies in the brain and central nervous system. Idiopathic CFD is a neurometabolic syndrome that develops from the age of four months, starting with irritability and sleep disturbances, and progressing to limb stiffness, impaired balance and gait, and involuntary muscle movements.³² Many of these children also develop epilepsy, as well as slowed head growth, reminiscent of the microcephaly in the Brazilian infants. As the children grow to ages three to six years old, they develop visual disturbances and hearing loss. The condition is due to a malfunctioning of the folate receptors in the brain, which blocks the transfer of folate from the blood to the cerebrospinal fluid. One possible reason for this is that excess folic acid in the serum has bound to the receptors and blocked their access to methyltetrahydrofolate. Clearly, over-exposure to folic acid through diet and supplements can promote the development of CFD.

A study on twenty-five low-functioning autistic children revealed a clear link between autism and low cerebral folate levels.³³ Despite normal serum folate, CSF 5-methyltetrahydrofolate was low in twenty-three of twenty-five autistic patients examined. Folate

receptor antibodies were identified in nineteen of the patients. Although this was investigated, no link was found with any genetic mutations in the gene coding for the folate receptors. It seems likely to me that irreversible binding of folic acid to the folate receptors could induce an autoimmune response to the receptor-folic-acid complex that leads to the development of antibodies to the folate receptors.

Antibodies to the folate receptors in the mother are also linked to neural tube defects in the fetus. A study from 2004 showed that women in the United States who have had a pregnancy with a neural tube defect were more likely to have autoantibodies to the human placental folate receptor,³⁴ which will then block the supply of folate to the fetus.

MTHFR, B₁₂ and METHYLATION-TRANSSULFURATION PATHWAYS

An article on folate would not be complete without a diagram of the methylation cycle; these biological pathways may seem daunting to the novice but are actually fairly straightforward once you follow the logic. A simplified diagram of the methylation cycle is given in Figure 3. Most notable are two very important enzymes, methylene tetrahydrofolate reductase (MTHFR) and methionine synthase (MS). Defects in MTHFR have been linked to chronic fatigue syndrome³⁶ and to autism,³⁷ as well as other conditions. These defects are a major source of the so-called “folate trap,” because the all-important methyl group piles up in useless accumulations of methylene-tetrahydrofolate, while methionine synthesis can’t happen, so homocysteine piles up as well.

Methionine synthase is also a vulnerability point in the pathway. This is the crucial reaction that converts homocysteine to methionine, after which methionine can deliver its cargo of a methyl group to all kinds of recipients. The methyl group is transferred from methyltetrahydrofolate to methionine, but, crucially, vitamin B₁₂ (cobalamin) is an essential cofactor to catalyze the reaction. Cobalamin, in turn, depends crucially on the mineral cobalt to function, and cobalt is one of the minerals that is chelated by glyphosate, making it unavailable. Furthermore, glyphosate disrupts the synthesis

Folic acid supplementation masks the symptoms that doctors have been trained to look for in vitamin B12 deficiency, also known as pernicious anemia.

of the corrin ring in cobalamin, with glycine being one of the important substrates for pyrrole synthesis, and pyrrole forming a core building block of corrin.³⁸ Once again, glyphosate getting in the way of glycine can cause trouble, in this case leading to vitamin B₁₂ deficiency.

Postmortem studies on brains of people with autism and schizophrenia, as well as elderly people, revealed low levels of cobalamin in the brain in all three groups.³⁹ In the autistic subjects, this was associated with decreased activity of methionine synthase and elevated levels of homocysteine.

Folic acid supplementation masks the symptoms that doctors have been trained to look for in vitamin B₁₂ deficiency, also known as pernicious anemia. As a result, doctors are missing cases of severe B₁₂ deficiency, which can lead to significant loss of myelin, brain fog, and extreme physical weakness and fatigue, along with back pain due to degeneration of the spinal cord if the deficiency lasts too long. All of these symptoms seem to be more and more prevalent in our society. Pain killer prescriptions are at an all-time high and people are overdosing in record numbers.

Folic acid supplementation insidiously corrects for macrocytosis associated with B₁₂ deficiency, as has been explained very well by Sally Pacholok in her excellent book, *Could it be B₁₂?*⁴⁰ This idea is also supported by at least one published study.⁴¹ This results in a delayed testing for B₁₂ deficiency for elderly presenting with symptoms of dementia and fatigue linked to B₁₂ deficiency. It is tragic when a B₁₂ supplement could restore mental health but there is no awareness among the medical practitioners that this is the problem. This effect applies not only to the elderly. Among those younger than sixty-five years old, the percentage with low serum vitamin B₁₂ without macrocytosis significantly increased from 45 percent in the pre-fortification period to 85 percent in the post-fortification period.⁴¹

Vitamin B₁₂ is only found in animal products, so vegans have a difficult time getting adequate amounts. Many medicines, including metformin, statin drugs and acid reflux drugs, interfere with B₁₂ absorption from the gut. It is estimated that as many as 30 percent of people in the U.S. suffer from B₁₂ deficiency. Fortunately, there is another pathway from homocysteine to methionine where betaine serves as the source of methyl groups, and this depends on neither folate nor B₁₂. It is likely that a diet high in betaine can reduce the need for folate and B₁₂.

Celiac disease has become an epidemic in recent years, and untreated celiac patients often suffer from deficiencies in both folate and B₁₂ due to absorption problems.⁴² In previous work together with Anthony Samsel, I proposed that the epidemic in celiac disease may be due to glyphosate contamination in the wheat, because glyphosate is increasingly being used as a desiccant on wheat right before the harvest.⁴³

Nitrous oxide can cause irreversible oxidation of B₁₂ to an inactive form, such that levels can test as adequate even when usable levels are much too low. Nitrous oxide can arise through oxidation of ammonia, which will build up if glutamine synthase is defective. Glutamine synthase combines ammonia with glutamate to make glutamine. This process depends on manganese, a metal that glyphosate chelates, making it unavailable.³⁸


Finally, homocysteine itself, the precursor to methionine, can be deficient. In fact, the bottom of the graph in Figure 3 that shows other ways homocysteine can be used should not be neglected. Sulfate, cysteine and taurine are biologically important molecules that play many roles in the body. These molecules all contain sulfur, a mineral that is neglected by the nutrition experts and widely deficient in the population.⁴⁴ Sulfur deficiency can be induced by glyphosate as it has been shown to interfere with sulfur uptake in plants. Methylation capacity can be reduced simply because homocysteine is more urgently needed as a precursor to these other biologically active molecules.

CONCLUSION

Folate deficiency, together with vitamin B₁₂ deficiency, are widespread in the U.S. population today, despite the fact that most people are not lacking resources for adequate nutritional intake. The problem, I believe, mainly stems from disruption of the gut microbes due to chronic low-dose exposures to glyphosate, a patented anti-microbial agent. Various popular drugs and antibiotic treatments compound the problem. In 1998, the U.S. implemented a plan to fortify wheat-based products with folic acid, in the hopes of decreasing the incidence of spina bifida and other neural tube defects. Unfortunately, folic acid is a synthetic form of folate, and converting it to the active form is costly to the liver. Unconverted folic acid accumulating in the blood can cause unanticipated problems related to cerebral folate deficiency.

Folic acid supplementation during early pregnancy protects from spina bifida and avoids either a spontaneous miscarriage or a severe developmental defect causing early postnatal death, associated with spina bifida, microcephaly or anencephaly. However, continued folic acid supplementation throughout pregnancy can result in an accumulation of unmodified folic acid in the fetal blood, causing fetal cerebral folate deficiency during the second half of gestation. This will disrupt methylation pathways in the brain, and may result in hydrocephaly and enlarged ventricles, and, in the extreme case, exencephaly. Impaired methylation pathways, enlarged ventricles, and disrupted folate ho-

meostasis are all features of autism.

The best way to maintain adequate supplies of folate and cobalamin is to eat a strictly organic diet that is rich in fresh vegetables, seafood, eggs, and grass-fed beef and liver. Particularly good sources of folate include beef liver, spinach, black-eyed peas, asparagus, Brussels sprouts, avocado, broccoli, mustard greens, green peas and kidney beans. 

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REFERENCES

- Greene ND, Copp AJ. Development of the vertebrate central nervous system: formation of the neural tube. *Prenatal Diag* 2009; 29: 303-311.
- Smithells RW, Sheppard S, Schorah CJ. Vitamin deficiencies and neural tube defects. *Arch Dis Child*. 1976;51(12):944-50.
- Rossi M, Amaretti A, Raimondi S. *Nutrients* 2011;3:118-134.
- Krüger M, Shehata AA, Schrödl W, Rodloff A. Glyphosate suppresses the antagonistic effect of *Enterococcus* spp. on *Clostridium botulinum*. *Anaerobe* 2013;20:74078.
- James SJ, Cutler P, Melnyk S, Jernigan S, Janak L, Gaylor DW, Neubrander JA. Metabolic biomarkers of increased oxidative stress and impaired methylation capacity in children with autism. *Am J Clin Nutr* 2004;80(6):1611-7.
- MRC Vitamin Research Group. Prevention of neural tube defects: Results of the Medical Research Council Study. *Lancet* 1991;338:131-137.
- Patanwala I, King MJ, Barrett DA, Rose J, Jackson R, Hudson M, Philo M, Dainty JR, Wright AJA, Finglas PM, Jones DE. Folic acid handling by the human gut: implications for food fortification and supplementation. *Am J Clin Nutr* 2014;100(2):593-599.
- Samsel A, Seneff S. Glyphosate's suppression of cytochrome P450 enzymes and amino acid biosynthesis by the gut microbiome: Pathways to modern diseases. *Entropy* 2013; 15:1416-1463.
- Choi SW, Mason JB. Folate and carcinogenesis: An integrated scheme. *The Journal of Nutrition* 2000;130:129-132.
- Kim YI. Folate and carcinogenesis: Evidence, mechanisms, and implications. *J Nutr Biochem* 1999;10: 66-88.
- McCullough ML, Giovannucci EL. Diet and cancer prevention. *Oncogene* 2004;23:6349-64.
- Mason JB, Dickstein A, Jacques PF, Haggarty P, Selhub J, Dallal G, Rosenberg IH. A temporal association between folic acid fortification and an increase in colorectal cancer rates may be illuminating important biological principles: a hypothesis. *Cancer Epidemiol Biomarkers Prev* 2007;16(7):1325-9.
- Troen AM, Mitchell B, Sorensen B, et al. Unmetabolized folic acid in plasma is associated with reduced natural killer cell cytotoxicity among postmenopausal women. *J Nutr* 2006;136:189-94.
- Dixon KH, Trepel JB, Eng SC, Cowan KH. Folate transport and the modulation of antifolate sensitivity in a methotrexate-resistant human breast cancer cell line. *Cancer Commun* 1991;3(12):357-65.
- Fleming GF, Schilsky RL. Antifolates: the next generation. *Semin Oncol* 1992;19:707-719.
- Takimoto CH. New Antifolates: Pharmacology and Clinical Applications. *The Oncologist* 1996; 1(1 & 2):68-81.
- Wang ES, O'Connor O, She Y, Zelenetz AD, Sirotnek FM, Moore MA. Activity of a novel anti-folate (PDX, 10-propargyl 10-deazaaminopterin) against human lymphoma is superior to methotrexate and correlates with tumor RFC-1 gene expression. *Leuk Lymphoma* 2003;44(6):1027-35.
- Cole BF, Baron JA, Sandler RS, Haile RW, Ahnen DJ, Bresalier RS, McKeown-Eyssen G, Summers RW et al. Folic acid for the prevention of colorectal adenomas: A randomized clinical trial. *JAMA* 2007;297(21):2351-2359.
- Sweeney MR, McPartlin J, Weir DG, Leslie D, Scott JM: Post-prandial serum folic acid response to multiple doses of folic acid in fortified bread. *British Journal of Nutrition* 2006; 94:1-8.
- Manshadi SD, Ishiguro L, Sohn K-J, Medline A, Renlund R, Croxford R, Kim Y-I. Folic Acid supplementation promotes mammary tumor progression in a rat model. *PLoS ONE* 2014; 9(1): e84635.
- Benítez-Leite S, Macchi ML, Acosta M. Malformaciones congénitas asociadas a agrotóxicos [Congenital malformations associated with toxic agricultural chemicals] *Archivos de Pediatría del Uruguay* 2009;80:237-247.
- Person A, Spitters C, Patrick G, Wasserman C, Kelen PV, VanEenwyk J, Gilboa S, Kucik J, Sorenson R, Ailes E, Stahre M. Notes from the Field: Investigation of a Cluster of Neural Tube Defects Central Washington, 2010-2013. *Morbidity and Mortality Weekly Report (MMWR)* 2013;62(35):728-728.
- Campana H, Pawluk MS, Lopez Camelo JS. [Births prevalence of 27 selected congenital anomalies in 7 geographic regions of Argentina]. *Arch Argent Pediatr* 108(5) 2010: 409-17.
- BBC News. Zika virus triggers pregnancy delay calls. Jan. 23, 2016. <http://www.bbc.com/news/world-latin-america-35388842>. [Last accessed January 23, 2016].
- Paganelli A, Gnazzo V, Acosta H, López S, Carrasco AE. Glyphosate-based herbicides produce teratogenic effects on vertebrates by impairing retinoic acid signaling. *Chem Res Toxicol* 2010;23(10):1586-1595.
- Pai YJ, Leung KY, Savery D, Hutchin T, Prunty H, Heales S, Brosnan ME, Brosnan JT, Copp AJ, Greene ND. Glycine decarboxylase deficiency causes neural tube defects and features of non-ketotic hyperglycinemia in mice. *Nat Commun* 2015;6:6388.
- Narisawa A, Komatsuzaki S, Kikuchi A, Niihori T, Aoki Y, Fujiwara K, Tanemura M, Hata A, Suzuki Y, Relton CL, Grinham J, Leung K-Y, Partridge D, Robinson A, Stone V, Gustavsson P, Stanier P, Copp AJ, Greene NDE, Tominaga T, Matsubara Y, Kure S. Mutations in genes encoding the glycine cleavage system predispose to neural tube defects in mice and humans. *Human Molecular Genetics* 2012;21(7):1496-1503.
- Gilmore JH, Smith LC, Wolfe HM, Hertzberg BS, Smith JK, Chescheir NC, Evans DD, Kang C, Hamer RM, Lin W, Gerig G. Prenatal mild ventriculomegaly predicts abnormal development of the neonatal brain. *Biol Psychiatry* 2008;64(12):1069-76.
- Kume A, Koyata H, Sakakibara T, Ishiguro Y, Kure S, Hiraga K. The Glycine Cleavage System: Molecular cloning of the chicken and the deduced protein structures. *JBC* 1991; 266(5):3323-3329.
- Burren KA, Savery D, Massa V, Kok RM, Scott JM, Blom HJ, Copp AJ, Greene ND. Gene-environment interactions in the causation of neural tube defects: folate deficiency increases susceptibility conferred by loss of Pax3 function. *Hum Mol Genet* 2008;17:3675-3685.
- Burren KA, Scott JM, Copp AJ, Greene ND. The genetic background of the curly tail strain confers susceptibility to folate-deficiency-induced exencephaly. *Birth Defects Res. A Clin Mol Teratol* 2010; 88:76-83.
- Ramaekers VT, Blau N. Cerebral folate deficiency. *Dev Med Child Neurol* 2004;46(12):843-51.
- Ramaekers V, Blau N, Sequeira JM, Massogno M-C, Quadros EV. Folate receptor autoimmunity and cerebral folate deficiency in low-functioning autism with neurological deficits. *Neuropediatrics* 2007; 38(6): 276-281.
- Rothenberg SP, da Costa MP, Sequeira JM, Cracco J, Roberts JL, Weedon J, Quadros EV. Autoantibodies against folate receptors in women with a pregnancy complicated by a neural-tube defect. *N Engl J Med* 2004;350(2):134-42.
- Refsum H. Folate, vitamin B₁₂ and homocysteine in relation to birth defects and pregnancy outcome. *British Journal of Nutrition* 2001; 85(Suppl. 2): S109-S113.
- Craig C, The Folic Acid Controversy, MTHFR and Chronic Fatigue Syndrome. Aug 12, 2014. <http://www.cortjohnson.org/blog/2014/08/12/folic-acid-controversy-mthfr-chronic-fatigue-syndrome/> [last accessed January 28, 2016].
- Boris M, Goldblatt A, Galanko J, James SJ. Association of MTHFR gene variants with autism. *Journal of American Physicians and Surgeons* 2004;9(4):106-108.
- Samsel A, Seneff S. Glyphosate, pathways to modern diseases III: Manganese neurological diseases, and associated pathologies. *Surgical Neurology International* 2015; 6:45.
- Zhang Y, Hodgson NW, Trivedi MS, Abdolmaleky HM, Fournier M, Cuenod M, Do KQ, Deth RC. Decreased brain levels of vitamin B₁₂ in aging, autism and schizophrenia. *PLoS One*. 2016;11(1):e0146797.
- Pacholak SM, Stuart JJ. *Could It Be B₁₂?: An Epidemic of Misdiagnoses*. Paperback. January 26, 2011. Quill Driver Books, Fresno CA, USA.
- Wyckoff KF, Ganji V. Proportion of individuals with low serum vitamin B₁₂ concentrations without macrocytosis is higher in the post-folic acid fortification period than in the pre-folic acid fortification period. *Am J Clin Nutr* 2007;86:118792.
- Dahele A, Ghosh S. Vitamin B₁₂ deficiency in untreated celiac disease. *Am J Gastroenterol* 2001;96(3):745-50.
- Samsel A, Seneff S. Glyphosate, pathways to modern diseases II: Celiac Sprue and gluten intolerance. *Interdiscip Toxicol* 2013; 6(4): 159-184.
- Seneff S. Sulfur deficiency: A possible contributing factor in obesity, heart disease, Alzheimer's and chronic fatigue. July 2, 2011. <http://www.westonaprice.org/health-topics/abcs-of-nutrition/sulfur-deficiency/#sthash.vfZTfHC.dpuf> [last accessed Jan 29, 2016].

Saturated Fat Does a Body Good: Exploring the Biological Roles of These Long-Demonized Yet Heroic Nutrients

Chris Masterjohn, PhD

Since the rise of the diet-heart hypothesis in the 1960s, the idea that saturated fat is the “bad fat” has dominated the fields of nutrition science and medicine. This, combined with the observation that we can make our own saturated fat from carbohydrate, has led us as a society to overlook or diminish what other fields such as biochemistry and cellular biology have been elucidating over a similar timeframe: that saturated fats play essential roles in the body and are necessary for life and health.

I have criticized the diet-heart hypothesis extensively and repeatedly elsewhere, and will not do so in this article. Rather, I will explore the essential biological roles of saturated fats and the question of whether and how saturated fats in the diet might benefit human health.

DEFINING SATURATED FATS

Saturated fatty acids are one of three broad classes of fatty acids. Compared to those that are monounsaturated and polyunsaturated, saturated fatty acids are straight in shape and easily pack together. Those that are monounsaturated are less packable, and those that are polyunsaturated are the least packable. This is why in temperate climates highly saturated fats such as butter or coconut oil will be solid at room temperature, whereas highly monounsaturated oils such as olive oil will be liquid at room temperature.

Similarly, olive oil will very slowly solidify in the refrigerator, whereas polyunsaturated oils such as corn oil will stay liquid in the refrigerator.

This quality partly accounts for how differently fatty acids are distributed in different foods. Unlike humans and other warm-blooded animals, plants do not regulate their own temperature and are instead subject to the whims of the ambient temperature. Plants that grow in tropical climates, such as coconut and palm trees, produce oils that are very saturated,

whereas plants that grow in temperate climates such as olive trees, produce oils that are less saturated. Similarly, fish are subject to the ambient temperatures of the waters they inhabit, and fish that swim in very cold waters accumulate large amounts of polyunsaturated fat. As discussed below, this effect of climate has a large influence on the saturated fat content of different traditional diets.

SATURATED FATS IN TRADITIONAL DIETS

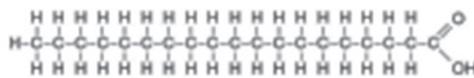
One of the popular mythologies about saturated fats is that the American diet is rich in saturated fat compared to most traditional diets because affluence has allowed us to increase our dependence on animal foods. This idea rests on two separate misconceptions: one is that animal

fats are predominantly saturated while plant fats are predominantly unsaturated; the second is that the American diet is, by historical standards, rich in saturated fat.

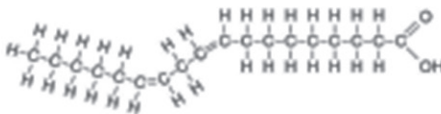
As shown in Table 1, the fats and

oils with the least saturated fat are of plant origin, but those with the most saturated fat are also of plant origin. On the whole, animal fats tend to be a mix primarily of saturated and monounsaturated fat, with a small amount of polyunsaturated fat. As a result, fats and oils of animal origin occupy the middle of the spectrum and could best be described as having a moderate amount of saturated fat.

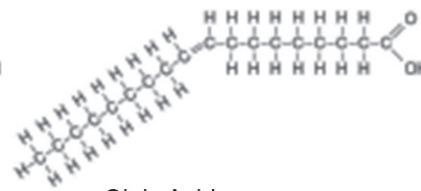
As shown in Table 2, the traditional diets that were richest in saturated fat were not those that relied mostly on animal foods, but rather the Pacific Island diets that relied heavily on coconut. When comparing



Stearic Acid (saturated fatty acid)



Linoleic Acid (polyunsaturated fatty acid)



Oleic Acid
(monounsaturated fatty acid)

TABLE 1. Percent of fatty acids as saturated fatty acids in common fats and oils. Plant oils can be rich or poor in saturated fat, while animal fats tend to be intermediate.

FAT	% SATURATED FATTY ACIDS
Coconut	86
Palm kernel	82
Cocoa butter	60
Butter	51
Beef tallow	50
Palm oil	49
Lard	39
Duck fat	33
Chicken fat	30
Cottonseed	26
Salmon oil	20
Peanut oil	17
Soybean oil	16
Olive oil	14

TABLE 2. Saturated fat content as a percent of total calories in the American diet and selected traditional diets^{1, 2, 3, 4}

DIET	% TOTAL CALORIES AS SATURATED FAT
Standard American diet	11
Inuit	10-12
Kitava	17
Pukapuka	30
Tokelau	49

The diet of Tokelau is remarkable because it contains the highest recorded consumption of saturated fat in the world, at about half of total calories.

the diets traditional to three different Pacific islands—Kitava, Pukapuka, and Tokelau—the primary determinant of their saturated fat content is the relative proportion of coconut and starchy tubers.^{1,2} As a result, these diets derive the bulk of their calories from either carbohydrates or from saturated fat. The diet of Tokelau is remarkable because it contains the highest recorded consumption of saturated fat in the world, at about half of total calories. This is over four times the average consumption of saturated fat in the United States.³ The diet of Kitava is remarkable because the total fat content is very low by American standards—hardly more than 20 percent of calories—yet the percentage of total calories derived from saturated fat is 50 percent greater than that of the American diet.

We could take the Inuit as an example of extreme reliance on animal foods. The traditional Inuit diet was 10 to 12 percent saturated fat,⁴ practically identical to the average in the United States, which is estimated to be 11 percent. Certainly a diet based on ruminant meat and dairy fat rather than marine foods would provide a greater percentage of animal-based saturated fat, but these comparisons are sufficient to show that saturated fat intake is a function of the specific foods that make up the bulk of the diet and not whether those foods are of animal or plant origin.

In the grand scheme of things, moreover, we would have to say that by historical standards the saturated fat content of the standard American diet is not high but moderate.

Let us now turn to the question of whether the saturated fat in our diet could provide impor-

tant health benefits by examining the essential roles of saturated fatty acids within our bodies.

STRUCTURAL ROLES OF SATURATED FATTY ACIDS⁵

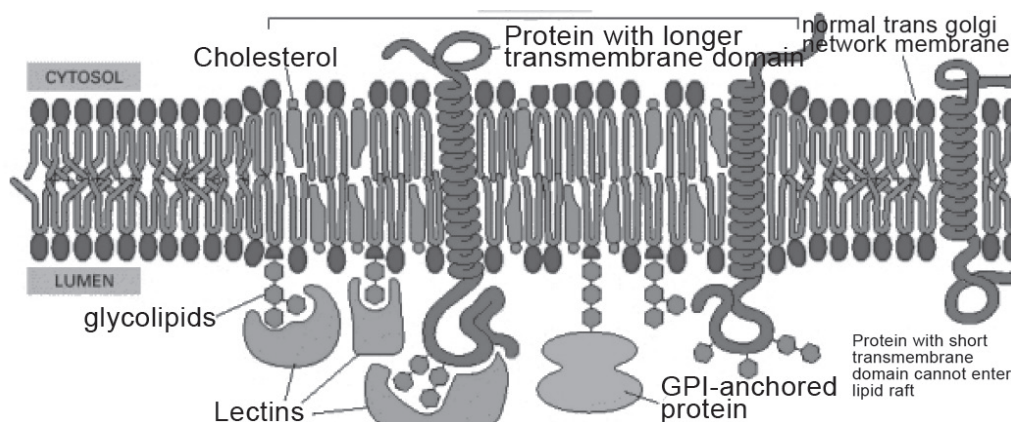
We can divide the biological roles of saturated fatty acids broadly into two categories: structural roles and roles as sources of energy. We turn first to their structural roles.

Within the relatively constant temperature of our own bodies, saturated fats make cellular membranes relatively less fluid while unsaturated fats make those same membranes relatively more fluid. Our cells seek to strike the right balance between different fatty acids to achieve the optimal amount of fluidity; consequently, half of the typical cellular membrane's fatty acids are saturated.

Cellular membranes are often described as a “fluid mosaic.” They consist of a lipid phase that has approximately the consistency of olive oil, studded by proteins, some of which move around freely and some of which are kept in position. Specific saturated fatty acids—mainly fourteen-carbon myristate, sixteen-carbon palmitate and eighteen-carbon stearate—form the molecular anchors that attach many proteins to the membrane. Those proteins will often be anchored in specific regions called “lipid rafts,” which are enriched in saturated fatty acids to provide the stability needed to keep those proteins from floating away from their proper position.

The process of anchoring a protein with myristate is known as myristoylation. Similarly, anchoring a protein with palmitate is known as

DIAGRAM OF CELL MEMBRANE WITH THICKER LIPID RAFT



SOURCE: Alberts B, Johnson A, Lewis J, Raff M, Roberts K, Walter P. **Molecular Biology of the Cell**. 4th Edition. (New York: Garland Science) 2002.

palmitoylation, and anchoring a protein with stearate is called stearylation. In addition to anchoring the proteins to membranes, these fatty acids can be used as on-off switches for proteins or to tag them for specific destinations within different compartments of the cell.

Unfortunately, saturated fat's reputation as the "bad fat" and the assumption that there is no need to consume saturated fat in the diet because we can synthesize it ourselves has led to a dearth of research around the question of whether consuming saturated fats might benefit these processes.

Nevertheless, one interesting study published in *Nature* last year is worth mentioning.⁶ The researchers genetically manipulated fruit flies to remove their ability to synthesize stearate (saturated stearic acid). Since the fruit flies lacked stearate, they could not stearylate a specific mitochondrial protein; consequently, their mitochondria fragmented apart. Feeding the flies dietary stearate reversed this effect.

The researchers then considered Parkinson's disease as a pathological condition where this process could be important, because Parkinson's disease is associated with mitochondrial fragmentation. They used an established genetic model of Parkinson's wherein fruit flies demonstrate mitochondrial fragmentation, neurodegeneration, impaired motor control and reduced lifespan. Feeding the flies stearate largely reversed the changes in their nerve function, motor control and lifespan, and fully reversed the mitochondrial fragmentation.

Although it would be unwise to generalize directly from these fruit fly experiments to humans, they do demonstrate proof of the principle that dietary stearate can, under certain conditions, support the unique roles of stearate that are essential to mitochondrial function.

SYNTHESIZING OUR OWN SATURATED FAT

Since we can synthesize our own saturated fat from carbohydrate, we must ask whether we can synthesize enough for optimal health, and whether there is any reason to consider it preferable to directly consume saturated fat in the diet. Although to my knowledge there are no research studies that provide a clear and

unambiguous answer to this question, one way to tackle the question indirectly is to look at how much saturated fat we do synthesize under various conditions, and compare those values to the maximum amount of saturated fat we are able to make.

The conversion of carbohydrate to fat is known as *de novo* lipogenesis (DNL). This pathway initially allows the synthesis of palmitate. Palmitate can then be converted to other saturated fats, to monounsaturated fats, and, to an extremely limited degree, polyunsaturated fats.

Under almost every condition measured, DNL is an extremely minor pathway in humans.⁷ On a Western diet, healthy men will synthesize one to two grams of fat per day, while healthy women will synthesize a similar amount in the luteal phase of their menstrual cycle and will synthesize three to six grams of fat per day in the follicular phase. In obesity, diabetes, infection and other inflammatory diseases, DNL reaches about three to six grams of fat per day. On a 70 percent carbohydrate 15 percent fat diet—similar to but slightly lower in fat than the Kitavan diet—DNL rises to ten grams per day. These values suggest that under most conditions the endogenous synthesis of fat is much smaller than the amount consumed in the diet. The maximum value occurs in a diet comprised of 70 percent carbohydrate 15 percent fat diet, where we could expect a typical person to consume about thirty grams of fat in the diet and synthesize ten grams of fat endogenously.

There is one condition under which DNL can become a major pathway in humans: when the total carbohydrate intake exceeds a person's total energy expenditure, the capacity to convert the extra carbohydrate to fat is virtually unlimited, reaching at least five hundred grams per day.⁸ Although this condition has little if any practical relevance, it makes it clear that DNL is usually kept under ten grams per day, not because we lack the ability to synthesize more than that, but because under ordinary conditions our bodies "choose" not to do so.

It would seem, then, that DNL is usually such a minor pathway either because forty grams of total fat per day is more than enough to provide us with all of the specific fatty acids

Since the fruit flies lacked stearate, they could not stearylate a specific mitochondrial protein; consequently, their mitochondria fragmented apart.

we require for structural roles, or because there is some cost associated with DNL that exceeds whatever benefit we would obtain by providing greater support to those structural roles.

The major cost associated with DNL is that it uses up energy carried by NADPH, which is a form of niacin (vitamin B₃) that transfers energy from glucose to other systems. These systems include the anabolic processes by which we synthesize fats and cholesterol, but they also include antioxidant defense, detoxification and the recycling of nutrients such as folate and vitamin K. If the rate of DNL were to become excessive, it would tax the energy needed for antioxidant defense, detoxification, and nutrient recycling (see Figure 3).

It would seem likely that a diet where the total carbohydrate content exceeds the total energy expenditure would pose a serious risk of compromising these other processes. Such a diet is rare, however, and it is unclear whether we can obtain any health benefit by consuming a sufficient fat-to-carbohydrate ratio to bring the daily rate of DNL down from ten grams to one to six grams. Indeed, the traditional Kitavan diet would not be expected to maximally suppress DNL, yet Kitavans are remarkably healthy.

It seems unlikely, moreover, that we would require more than forty grams of fat per day to fulfill the structural roles of fatty acids, because the overwhelming reason that we eat food is to break the molecules down for energy. Each of us tends to consume our weight in food several times per month. Only a small portion of that food is used to provide or synthesize the molecules that make up our tissues. An additional portion is broken down for energy to fuel internal movements such as our heart beating and our lungs breathing, and to fuel the large movements that we think of as our physical activity. The vast majority of it, however, is broken down for energy to invest in the maintenance and repair of tissues and to release copious amounts of heat into our environment. We therefore turn to some of the benefits of specific saturated fatty acids in energy metabolism.

MEDIUM-CHAIN FATTY ACIDS FOR WEIGHT LOSS

In the context of a mixed meal, carbohydrate stimulates insulin, which, in proportion to the amount of carbohydrate consumed, shifts

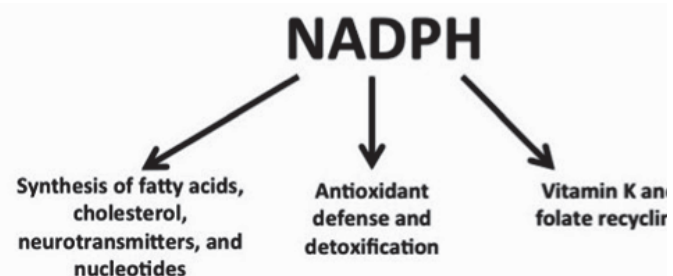
us away from fat metabolism and toward carbohydrate metabolism. This means that if the carbohydrate content of the meal were to fill our immediate need for energy, we would burn the carbohydrate for energy and store the fat. If the carbohydrate content of the meal were to fill half our immediate need for energy, we would burn the carbohydrate for energy and make up for the deficit using a portion of the fat.

This happens through several mechanisms: insulin promotes uptake of triglycerides into adipose tissue, prevents free fatty acids from being released from adipose tissue into the blood, and turns off the carnitine shuttle, which transports fatty acids into the mitochondrion where they can be burned for energy. Certain fatty acids are immune to this effect because of their small size. Fatty acids with ten or fewer carbons—all of which are saturated—travel directly to the liver via the portal vein upon digestion, and thereby escape the effects of insulin on the storage of fat in adipose tissue. Once in the liver, they also slip easily into the mitochondrion without the need for the carnitine shuttle, thereby escaping insulin's effect on the shuttle. The liver then converts the breakdown products of these fatty acids into ketones, which are sent out into the blood for use by other tissues such as the brain. As a result, the carbohydrate content of a mixed meal does not suppress the simultaneous utilization of these smaller fatty acids for energy.

Given this difference between shorter and longer fatty acids, we could expect the shorter fatty acids to increase total energy expenditure. Since greater energy expenditure in the brain could cause the brain to better perceive an abundance of food, we might also expect the shorter

FIGURE 1. Excessive DNL Taxes Energy Needed for Other Critical Purposes

De novo lipogenesis (fatty acid synthesis) requires energy input from NADPH. NADPH is a form of niacin (vitamin B₃) that carries energy from glucose and brings it to systems engaged in anabolic (building things up) and reductive (adding electrons to other things) purposes. In practical terms, these include the synthesis of cholesterol, neurotransmitters, and nucleotides; antioxidant defense and detoxification; and the recycling of vitamin K and folate. Synthesizing excessive amounts of fat would be expected to compromise the supply of energy to these other systems and thereby compromise critical processes such as antioxidant defense, detoxification, and nutrient recycling.



fatty acids to decrease food intake. Research studies using medium-chain triglyceride oil (MCT oil)—composed exclusively of eight-carbon and ten-carbon fatty acids—support these concepts. Replacing long-chain fats with MCT oil at breakfast suppresses food intake at lunch.⁹ Longer-term replacement of long-chain fats with MCT oil leads to increased energy expenditure,¹⁰ and in the context of a weight loss program it leads to greater loss of body weight and body fat.¹¹ Overall, these several studies suggest that replacement of other fats with MCT oil could decrease food intake by forty-five calories per day and increase energy expenditure by forty-five calories per day, leading to a net caloric deficit of ninety calories per day.

Coconut oil contains 15 percent of its fatty acids as those with ten or fewer carbons. We would therefore expect coconut oil to have a similar but approximately six times smaller effect. This small effect would add up over time, but it would be difficult to detect in a research study lasting only weeks and it would take a long time for an individual to see the results.

Lauric acid makes up about 45 percent of the fatty acids in coconut oil. Lauric acid is often considered a medium-chain fatty acid, but it has twelve carbons and it behaves more like a long-chain fat than a medium-chain fat when it comes to mitochondrial energy metabolism. This is a potential point of confusion, because if lauric acid is included we would say that coconut oil is 60 percent medium-chain fatty acids, when only 15 percent of its fatty acids would behave similarly to those found in MCT oil.

Nevertheless, lauric acid has its own benefits, most notably for the immune system. Triglycerides containing lauric acid can be digested into monolaurin, which has activity against a wide variety of bacteria, fungi, and viruses, including *Candida*, staph, *H. pylori*, influenza, Epstein-Barr, measles and HIV.¹²

Apart from coconut oil, the other traditional fat that contains fatty acids with ten or fewer carbons is butter. About 6 percent of butter fatty acids display this trait, but the fatty acids in butter are short-chain rather than medium-chain. These fatty acids are also burned for energy much more easily than long-chain fatty

acids, but the primary fatty acid in this group is butyrate, and butyrate has special benefits for intestinal and metabolic health.

BUTYRATE, INTESTINAL HEALTH, AND METABOLIC HEALTH

The short-chain saturated fatty acid butyrate takes its name from the Greek word for butter, where it is found most abundantly. A healthy human obtains copious amounts of butyrate produced by the microflora of the colon from dietary fiber. The cells of the colon are adapted to using this butyrate as their primary source of energy. Even though butyrate is primarily produced in the colon, it has beneficial effects throughout the body. For people who do not tolerate dietary fiber well, or for people with intestinal disorders, consuming butyrate in the diet in the form of butter could theoretically replicate some of the benefits of microbial production of butyrate within the colon.

In a small, uncontrolled pilot study,¹³ thirteen patients with mild to moderate Crohn's disease were given four grams per day of oral butyrate for eight weeks. Nine of those patients improved, seven of whom experienced complete remission. We would expect dietary butyrate to be absorbed in the small intestine and not to reach the colon. Indeed, this study found that oral butyrate only improved manifestations of Crohn's disease in the small intestine, not in the large intestine. The amount of butyrate used in the study is equivalent to that found in one stick of butter per day. This raises the possibility that butter consumption could be particularly beneficial to people with inflammation in the small intestine.

For diseases centered in the colon, an alternative means of supplying butyrate that would bypass the small intestine is needed. In a randomized crossover trial of ten patients with ulcerative colitis who were unresponsive to or intolerant of standard treatment,¹⁴ butyrate enemas reduced the stool frequency from five per day to two per day, stopped blood discharge in nine out of ten patients, and led to a 40 percent improvement in the level of inflammation.

Animal experiments suggest that butyrate has metabolic benefits that go well beyond the intestine. The infamous lard-based “high-fat

Butter consumption could be particularly beneficial to people with inflammation in the small intestine.

diet” made by Research Diets—on which an estimated fifty thousand mice worldwide are getting fat simultaneously at any given moment—has its obesogenic potential demolished when it is fed alongside a small amount of butyrate. In one study,¹⁵ animals fed this diet without butyrate developed the expected obesity and metabolic dysfunction, shown by high cholesterol, triglycerides and fasting insulin, and by low insulin sensitivity; animals fed the same diet with 5 percent butyrate did not get fat and remained metabolically healthy.

While dietary butyrate should not be seen as a full replacement for the normal production of butyrate by colonic microflora, these studies suggest that oral butyrate does indeed have many positive health benefits, especially in the context of compromised intestinal or metabolic health.

OXIDATIVE STRESS AND NUTRIENT ABSORPTION

One final benefit of saturated fats worth discussing is one that they share in common with monounsaturated fats: immunity to harmful forms of oxidation within the human body. Except at extreme temperatures, the only carbons within a fatty acid that are vulnerable

to spontaneous, harmful oxidation reactions are those that are situated between two double bonds. Saturated fats do not have any double bonds, and monounsaturated fats only have one double bond. Therefore, saturated and monounsaturated fats do not possess any vulnerable carbons. By contrast, polyunsaturated fats have two or more double bonds, and therefore have one or more vulnerable carbons (see Figure 4).

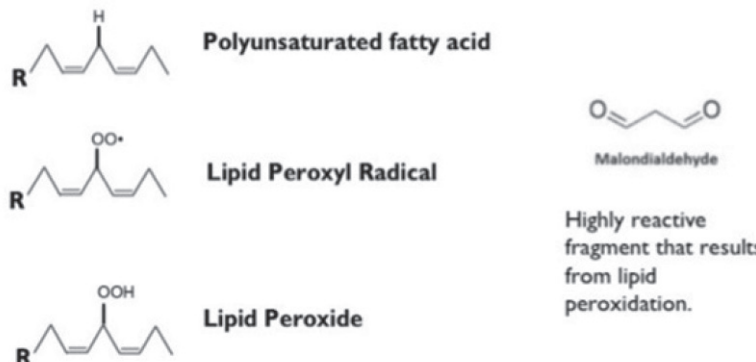
Consuming an excess of polyunsaturated fat has the potential to tax the supply of antioxidant nutrients and to make our tissues more vulnerable to harmful oxidation. Avoiding an excess of polyunsaturated fat has little to do with saturated fat *per se*, because we can avoid polyunsaturated fat by replacing it with monounsaturated fat or with carbohydrate.

This principle becomes relevant to an argument in favor of consuming more saturated and monounsaturated fats when we look at the absorption of fat-soluble vitamins. Dietary fat is needed to solubilize these vitamins and to stimulate the bile acids and enzymes involved in their digestion, and is therefore needed to absorb them properly. This is a general property of fat, and any fat—even canola oil—will help improve the absorption of these vitamins. Nevertheless, because some fat-soluble vitamins are vulnerable to oxidative damage, saturated and monounsaturated fats appear to be superior to polyunsaturated fats in promoting nutrient absorption. For example, beef tallow is superior to safflower oil in promoting the absorption of carotenoids and their conversion to retinol;¹⁶ similarly, olive oil is superior to corn oil at promoting the absorption of carotenoids.¹⁷

In addition to promoting the absorption of fat-soluble nutrients, saturated fats are associated with nutrients in whole foods. For example, butter contains valuable fat-soluble vitamins and is also rich in saturated fat. The vitamins themselves are coincidental to the saturated fat, but if one avoids the butter because of its saturated fat content, then one is

FIGURE 2. Polyunsaturated Fatty Acids Are Uniquely Vulnerable to Lipid Peroxidation

Polyunsaturated fatty acids are, among the three classes of fatty acids, uniquely vulnerable to a form of oxidation known as lipid peroxidation. Lipid peroxidation does occur enzymatically in the body in the context of highly regulated healthful processes, but when it occurs spontaneously it destroys valuable fatty acids and leads to potentially toxic byproducts. Key aspects of this harmful form of lipid peroxidation are shown here. A polyunsaturated fatty acid is any form of fatty acid with two or more double carbon-carbon bonds, which are signified as double lines. The carbon situated between two double bonds is vulnerable to losing its attached hydrogen along with the associated electron. If this happens, it becomes a lipid radical (not shown), which is quickly attacked by oxygen to become a lipid peroxy radical. The compound is a free radical (signified by the dot), which means it has an unpaired electron. Electrons have a strong drive to exist in pairs, so free radicals are highly reactive. The lipid peroxy radical will oxidize another molecule—usually vitamin E, in nutritionally adequate biological systems—and thereby become a lipid peroxide. Lipid peroxides can fragment into small aldehydes such as malondialdehyde, and these are dangerous because they can bind to proteins and other large molecules, thereby altering their structure and function, potentially contributing to tissue damage and metabolic dysfunction. Since monounsaturated fatty acids only contain one double bond and saturated fatty acids do not contain any, this process does not occur to saturated and monounsaturated fatty acids under the conditions that prevail within the human body.



also avoiding its vitamins. Butter could be very important in some diets for contributing the fat-soluble vitamins themselves, and also for facilitating their absorption.

FREE OF FEAR

Saturated fats play essential structural roles in the body, and specific saturated fatty acids have specific benefits to energy metabolism, immunity, intestinal health and metabolic health. There is insufficient evidence to claim that we require some specific amount of saturated fat in our diets every day, so it makes little sense to make dietary decisions based on the fear that we are not getting enough saturated fat. Conversely, because saturated fats play so many beneficial roles, and because our bodies will contain large amounts of saturated fat whether we embrace it in our diets or choose to avoid it, it makes little sense to make dietary decisions based on the fear that we are eating too much saturated fat. Instead, we should dispense with these fears altogether and look toward the menu of traditional fats, seeing a wide array of tools before us to meet our individual needs and priorities. Toward the top of that list for each of us should be preparing wholesome meals that we truly enjoy. ☯

Chris Masterjohn, PhD, is assistant professor of health and nutrition sciences at Brooklyn College in Brooklyn, NY. In 2012, he obtained his PhD in nutritional sciences from the University of Connecticut, where he studied the role of vitamin E and other antioxidants in regulating the metabolism of methylglyoxal, a potentially toxic byproduct of energy metabolism that appears to contribute to diabetes and cardiovascular disease. From the fall of 2012 through the summer of 2014, he worked as a postdoctoral research associate at the University of Illinois in Urbana, where he studied interactions between fat-soluble vitamins A, D, and K. He is now continuing this research at Brooklyn College. Chris created and maintains a website Cholesterol-and-Health.Com which is home to his blog, The Daily Lipid. He has published ten peer-reviewed scientific papers and has contributed regularly to the pages of Wise Traditions since 2004.

REFERENCES

1. Lindeberg S, Berntorp E, Nilsson-Ehle P, Terent A, Vessby B. Age relations of cardiovascular risk factors in a traditional Melanesian society: the Kitava Study. *Am J Clin Nutr*. 1997;66(4):845-52.
2. Prior IA, Davidson F, Salmond CE, Czochanska Z. *Am J Clin Nutr*. 1981;34(8):1552-61.
3. CDC, National Health and Nutrition Examination Survey: Intake of Calories and Selected Nutrients for the United States Population, 1999-2000. <http://www.cdc.gov/nchs/data/nhanes/databriefs/calories.pdf>
4. Bersamin A, Luick BR, King IB, Stern JS, Zindenberg-Cherr S. Westernizing diets influence fat intake, red blood cell fatty acid composition, and health in remote Alaskan Native communities in the center for Alaska Native health study. *J Am Diet Assoc*. 2008;108(2):266-73.
5. Unless otherwise cited, information in this section is derived largely from Alberts B, Johnson A, Lewis J, Raff M, Roberts K, Walter P. *Molecular Biology of the Cell*. 4th Edition. (New York: Garland Science) 2002.
6. Senyilmaz D, Virtue S, Xu X, Tan CY, Griffin JL, Miller AK, Vidal-Puig A, Teleman AA. Regulation of mitochondrial morphology and function by stearoylation of TFR1. *Nature*. 2015;525(7567):124-8.
7. Hellerstein MK. De novo lipogenesis in humans: metabolic and regulatory aspects. *Eur J Clin Nutr*. 1999;53(Suppl1):S53-65.
8. Acheson KJ, Schutz Y, Bessard T, Anantharaman K, Flatt JP, Jequier E. Glycogen storage capacity and de novo lipogenesis during massive carbohydrate overfeeding in man. *Am J Clin Nutr*. 1988;48(2):240-7.
9. Van Wymelbeke V, Himaya A, Louis-Sylvestre J, Fantino M. Influence of medium-chain and long-chain triacylglycerols on the control of food intake in men. *Am J Clin Nutr*. 1998;68(2):226-34.
10. St-Onge MP, Bourque C, Jones PJ, Ross R, Parsons WE. Medium- versus long-chain triglycerides for 27 days increases fat oxidation and energy expenditure without resulting in changes in body composition in overweight women. *Int J Obes Relat Metab Disord*. 2003;27(1):95-102.
11. St-Onge MP, Bosarge A. Weight-loss diet that includes consumption of medium-chain triacylglycerol oil leads to a greater rate of weight and fat mass loss than does olive oil. *Am J Clin Nutr*. 2008;87(3):621-6.
12. Richards BJ. Monolaurin – A Natural Immune Boosting Powerhouse. http://www.wellnessresources.com/health/articles/monolaurin_a_natural_immune_boosting_powerhouse/ October 31, 2008.
13. Di Sabatino A, Morera R, Ciccocioppo R, Cazzola P, Gotti S, Tinozzi FP, Tinozzi S, Corazza GR. Oral butyrate for mildly to moderately active Crohn's disease. *Aliment Pharmacol Ther*. 2005;22(9):789-94.
14. Scheppach W, Sommer H, Kirchner T, Paganelli GM, Bartram P, Christl S, Richter F, Dusel G, Kasper H. Effect of butyrate enemas on the colonic mucosa in distal ulcerative colitis. *Gastroenterology*. 1992;103(1):51-6.
15. Gao Z, Yin J, Zhang J, Ward RE, Martin RJ, Leffevre M, Cefalu WT, Je J. Butyrate improves insulin sensitivity and increases energy expenditure in mice. *Diabetes*. 2009;58(7):1509-17.
16. Hu X, Jandacek RJ, White WS. Intestinal absorption of beta-carotene ingested with a meal rich in sunflower oil or beef tallow: postprandial appearance in triacylglycerol-rich lipoproteins in women. *Am J Clin Nutr*. 2000;71:1170-80.
17. Clark RM, Yao L, She L, Furr HC. A comparison of lycopene and astaxanthin absorp-

RESEARCHERS COLLECTING HEALTHY CHILDREN STORIES

WAPF members, mothers and educators Gena Mavuli and Johanna Keefe announce their emerging website, Growing Success Stories at growsuccessstories.wordpress.com.

They are looking for testimonials on the growth and health of children brought up on the WAPF diet. Please email your stories—and photos—to holisticnutritionbasics@gmail.com.

They would also like to extend a special invitation to mothers who submitted a story over the years to the Healthy Baby Gallery to submit an update, and to remind us when your children were featured in *Wise Traditions*! This will provide a continuity that will be valuable in promoting ancestral diets for the health of mother and child.

Report on Cod Liver Oil: Testing the Safety and Vitamin Content of our Number One Superfood

Sally Fallon Morell, MA

Cod liver oil serves an important function in modern diets since it provides a convenient source of vitamins A and D. When Dr. Weston A. Price studied so-called primitive peoples, he found that they consumed large amounts of fat-soluble vitamins A and D (as well as vitamin K₂, which he called the X Factor) from foods such as pastured butter, egg yolks, organ meats, shellfish, fatty fish and animal fats—as well as from foods that modern people don't normally eat, such as intestines, brain, lungs, thymus, fish liver, fish heads, fish eggs and fat from various game animals. Since it is difficult for modern people to obtain and eat these foods, Dr. Price often recommended cod liver oil.

But Dr. Price was concerned about problems with cod liver oil. In his pioneering work, *Nutrition and Physical Degeneration*, he clearly states that cod liver oil is beneficial in low doses but toxic at high doses. One explanation for this observation is the fact that cod liver oil contains high levels of chemically fragile omega-3 fatty acids, namely EPA and DHA. Even when these fatty acids are not oxidized, an excess can potentially give rise to a number of health issues..

Like all modern foods, most cod liver oil today is subject to processing; in the case of cod liver oil, this processing generally applies heat from steaming, boiling or distillation.¹ These treatments could damage the omega-3 fatty acids in cod liver oil and remove natural vitamins, especially vitamin D. For that reason, the Weston A. Price Foundation has tended to recommend brands of cod liver oil that are extracted at low temperatures, especially through a process of fermenting the livers. The fermented cod liver oil is also reported to have higher levels of natural A and D than found in other brands.

RANCIDITY CONCERNS

In 2015, Dr. Kaayla Daniel released a report claiming that fermented cod liver oil is rancid and dangerous, and that the dark color of the oil is potentially a sign of rancidity.²

Most laboratories evaluate rancidity with four tests: PV or peroxide value; PA or anisidine value; TBA for thiobarbituric acid; and the TBARS test (for Thiobarbituric Acid-Reactive Substances), a more involved version of the TBA test. Daniel noted that the fermented cod liver oil had acceptably low levels of PV, PA and TBA, but high levels of TBARS.

Experts consider these tests as providing only approximate markers

of rancidity, obtained with equipment that is relatively inexpensive and widely available.³

A newer and more advanced technique, which uses nuclear magnetic resonance (NMR), can accurately pinpoint a range of peroxides and aldehydes. The testing equipment is expensive and only used in a small number of research laboratories. Aldehydes are small, highly reactive breakdown products of unsaturated fatty acids; they include acrolein and 4-hydroxy-trans-2-nonenal (HNE) (see page 32).

An expert in such NMR testing is Prof. Martin Grootveld, BSc, PhD, FIBMS, CBiol, FSB, FRSC. Highly qualified, Grootveld is a professor at Leicester School of Pharmacy, Faculty of Health and Life Sciences, De Montfort University, Leicester, UK. He is a Fellow of the Royal Statistical Society, professor of Bio-analytical Chemistry and Chemical Pathology, chair at the Faculty of Health and Life Sciences

NATIVE AMERICAN DIETS



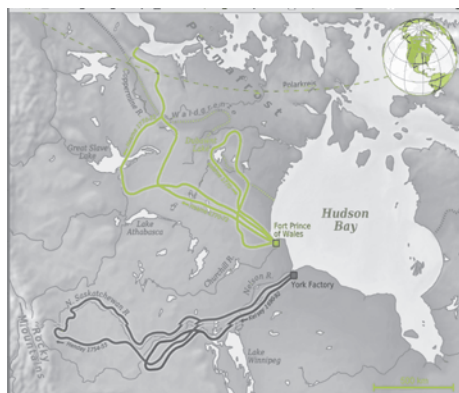
Samuel Hearne (1745-1792) was the first European explorer to travel across northern Canada to the Arctic Ocean. He provides a fascinating look at Native American foodways in his diary, *The Journeys of Samuel Hearne*, published 1768.

He writes: “On the twenty-second of July, we met several strangers, whom we joined in pursuit of the caribou, which were at this time so plentiful that we got everyday a sufficient number for our support, and indeed too frequently killed several merely for the tongues, marrow

and fat. . . . The most remarkable dish among them, as well as all the other tribes of Indians in those parts, both Chipewyan and Cree, is blood mixed with the half-digested food which is found in the caribou’s stomach, and boiled up with a sufficient quantity of water to make it of the consistence of pease-pottage. Some fat and scraps of tender flesh are also shred small and boiled with it. To render this dish more palatable, they have a method of mixing the blood with the contents of the stomach in the paunch itself, and hanging it up in the heat and smoke of the fire for several days; which puts the whole mass into a state of fermentation, which gives it such an agreeable acid taste, that were it not for prejudice, it might be eaten by those who have the nicest palates.”

The Indians preferred fat and organ meats to muscle meats. “Of all the dishes cooked by the Indians, a *beeatee*, as it is called in their language, is certainly the most delicious that can be prepared from caribou only, without any other ingredient. It is a kind of haggis, made with the blood, a good quantity of fat shred small, some of the tenderest of the flesh, together with the heart and lungs cut, or more commonly torn into small shivers; all of which is put into the stomach and toasted by being suspended before the fire on a string. . . . it is certainly a most delicious morsel, even without pepper, salt or any other seasoning.” Indeed, traditional peoples throughout the world have consumed a type of food similar to haggis—perishable offal quickly cooked inside an animal’s stomach, all conveniently available after a hunt—from ancient times. Modern haggis, the traditional dish of Scotland, contains sheep’s pluck (heart, liver and lungs); minced with onion, oatmeal, suet (fat) and salt, mixed with stock, traditionally encased in the animal’s stomach (pictured left).

Such dishes are exceedingly nutrient dense, providing fat soluble vitamins A, D and probably also K₂ in abundance.



A newer and more advanced technique, which uses nuclear magnetic resonance (NMR), can accurately pinpoint a range of peroxides and aldehydes.

Research Ethics Committee, head of the Medicinal Chemistry Group, Director of Bioanalysis, Pharmaceuticals and Health Doctoral Training Programme (DTP), and member of the editorial boards of *Bio Analytical Techniques* and *International Journal of Medical and Clinical Research*.

Grootveld's group published a paper describing their findings in which they used NMR to detect high levels of toxic aldehydes in restaurant fryer oil and in commercially available PUFA-rich oils subjected to heating according to standard frying practices.⁴ They found only low levels when they subjected commercially available olive oil, coconut oil, lard and beef fat to the same heating process.

The aldehydes are advanced products of lipid peroxidation, and they correspond to what would be picked up by the anisidine value (PA) test. However the anisidine test used in most labs is non-specific, whereas the NMR test is very specific. The researchers noted that in animal experiments, the primary lipid peroxidation products in the diet are not absorbed, or absorbed in only very small quantities, but advanced products (aldehydes such as *c,t*-alka-2,4-dienals and *n*-alkanals) are easily absorbed. Thus it appears that it is the harder-to-determine aldehydes that we should be looking for, in order to avoid foods that contain them.

As for the TBARS test, used by Daniel, Grootveld describes it as “analytical garbage.”

He considers it completely unreliable, serving little or no value for the estimation of rancidity. The test requires heating the samples for periods of about fifteen minutes. Heating for the test alone causes the breakdown of polyunsaturated fatty acids. According to Grootveld, “All results derived from this heat-dependent test system represent nothing more than artifactual data. The only way to avoid this artefactual peroxidation is to maintain samples at ambient (room) temperature and allow the monitored colouration to develop slowly for a sufficiently long period of time. Even then, the assay remains unspecific, since a wide range of aldehydes and further reactive compounds form colored products on reaction with the TBA reagent.”⁵

COD LIVER OIL TESTING

When the Weston A. Price Foundation first became aware of concerns about fermented cod liver oil, they sent a sample to Dr. Grootveld's laboratory for testing. The results came back negative: no aldehydes were found. The Foundation then sent another sample along with samples of four other brands of cod liver oil to Dr. Grootveld. These samples were ordered from their respective manufacturers by an independent individual having no association with the Weston A. Price Foundation. Grootveld directed two independent laboratories to perform two sets of analyses—one on opening the bottle, and another two weeks after opening.

AUSTRALIAN ABORIGINES: A PREFERENCE FOR FAT

The fascinating diet of the Australian Aborigines contained many sources of fat-soluble vitamins. They were keen observers of nature and knew when animals were fattest. During periods of abundance, they slaughtered ruthlessly and consumed only the best and fattest parts of the killed game.

Kangaroos were fat when the fern leaf wattle was in flower; opossums were fat when the apple tree was in bloom. (They prized the highly saturated opossum kidney fat, often eating it raw.) Other signs indicated when the carpet snake, kangaroo rat, mussels, oysters, turtles and eels were fat and so at their best as food. Fat from the intestines of marsupials and emus was a favorite; the yellow fat of the goanna was considered a delicacy. The dugong was another source of fat available to natives on the coasts. The Aboriginal peoples prized eggs from reptiles and birds and insects such as wichiti grubs and dugong moths, all rich sources of fat. For the Aborigines, foods lacking fat were “rubbish.” Kangaroos not fat enough were rubbish and thrown away—they were not worth carrying back to camp.

A study of the Bardi people in northwestern Australia found that they fished for different species of fish when they had the most fat lining the intestines. (Unlike fish from cold regions, tropical fish have very little fat in their flesh.) This fat was painstakingly removed, melted in a shell or tin can set on the coals and then drunk or used as a dip for the flesh of the fish. The Bardi harvested rock oysters during spring tides; oysters taken at other times were rubbish. An analysis found that the oysters harvested during spring were four times richer in fat. Interestingly, analysis of fat from fish guts, from fish livers, from oysters, and from turtle meat, fat and organ meats, found that the predominant fat was saturated.

SOURCE: Rouja and others. *Fat, Fishing Patterns, and Health Among the Bardi People of North Western Australia*. *Lipids* 2003 38(4):399-405.

The samples tested represent the five major types of cod liver oil available commercially: molecularly distilled with vitamins added; molecularly distilled without added vitamins; extracted without heat; steam extracted; and extracted without heat through fermentation of the livers. The results of these tests are shown in Figure 1.

The molecularly distilled cod liver oil with added vitamins contained low levels of n-alkanals on opening, with lower levels after two weeks. This brand also contained terpinoids called neral and geranial, which are themselves aldehydes (i.e., non-lipid oxidation-derived aldehydes) derived from a lemon oil flavoring added to the oil.

The highest levels of aldehydes were found in the molecularly distilled cod liver oil without added vitamins. One of the labs found these levels to be considerably lower fourteen days after opening. According to Grootveld, the disappearance of these aldehydes may be attributable to volatility and evaporation after exposure to air.

Sample three, of unheated cod liver oil, contained low levels of *c,t*-alka-2,4-dienals.

One sample of steam-extracted cod liver oil contained CHPDs—which are precursors to aldehydes—after fourteen days.

However, the fermented cod liver oil contained no detectable levels of aldehydes or CHPDs, even after fourteen days.

HOW DANGEROUS?

The question is, how dangerous are the non-fermented brands of cod liver oil? Is taking a teaspoon of molecularly distilled cod liver oil as risky as eating a piece of Kentucky fried chicken prepared in lard or vegetable oil?

Grootveld's team tested lard and corn oil after pan frying for various lengths of time. The results are shown in Figure 2. Total aldehydes are zero in lard pan heated up to ten minutes and in corn oil pan heated up to five minutes. At longer time intervals, aldehydes climb to levels considerably higher than those found in any type of cod liver oil. Indeed, lard heated for ninety minutes contains ten to one hundred times more total aldehydes than molecularly distilled cod liver oil, while corn oil heated to ninety minutes—typical when preparing large amounts of fried foods—can contain close to two hundred times the levels found in molecularly distilled cod liver oil. Since a fried chicken meal is likely to contain at least two or three tablespoons of lard or corn oil, the danger from a daily teaspoon of cod liver oil is considerably less. Obviously we need much more research on this important topic.

It is interesting to speculate on why the brown fermented cod liver oil is so stable, free from any detectable breakdown products.

Research indicates that the phenolic compounds in olive oil may play a role in preventing deterioration of the fatty acids.⁶ Phenols are plant compounds, some of which can give color to an oil—the brown color of fermented cod liver oil is due to the presence of high levels of these types of phenols. Thus, the dark, translucent color of fermented cod liver oil should not be taken as an indication of rancidity, but as a sign that the oil is stable and safe. (By contrast, the dark opaque color of industrial cod liver oil, the dregs of the steaming or distillation process, is likely due to impurities.)

TRANS FATTY ACIDS IN COD LIVER OIL

In her report, Dr. Daniel noted the presence of *trans* fatty acids in

FROM THE SOUTH SEAS



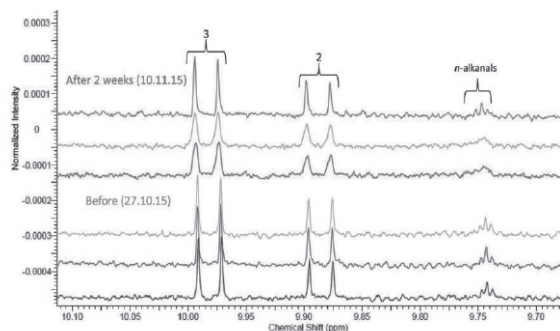
The Maoris of New Zealand consume the Kahawai fish during times of the year when it is fattest—typically stuffed with all the organs except the gall bladder. Photo by Kay Baxter



Fermented shark liver oil from Tahiti. Shark livers are put inside the shark stomach and hung in the trees to ferment. Each liver provides about one liter of fermented oil. Photo by Kay Baxter

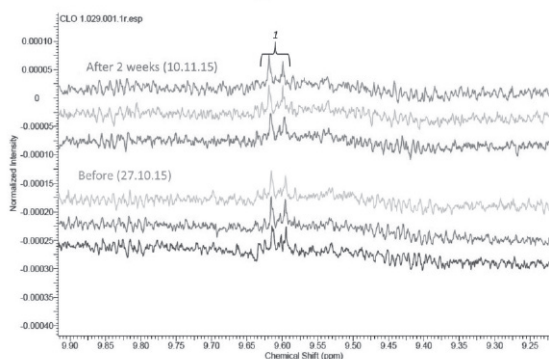
FIGURE 1: RESULTS OF COD LIVER OIL RANCIDITY TESTING ON OPENING AND AT TWO WEEKS

All samples were tested at two different labs. Each value represents the mean of three determinations. Results are given in umole per mole of total fatty acids.



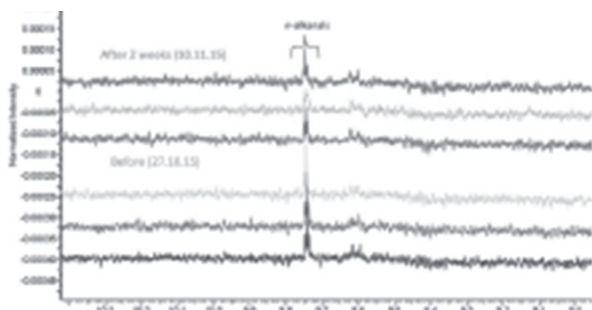
Exposure to Air (14 days)	Site	c,t-alka-2,4-dienals	n-alkanals	neral	geranial	CHPDs
No	Lab 1	nd	63	157	295	nd
No	Lab 2	nd	51			nd
Yes	Lab 1	nd	33	130	279	nd
Yes	Lab 2	nd	22			nd

OIL 1: Molecularly distilled cod liver oil with added vitamins. The two sets of peaks on the left are neral and geranial, aldehydes that are not actually lipid oxidation products, but arise from added lemon oil flavoring material.



Exposure to Air (14 days)	Site	c,t-alka-2,4-dienals	n-alkanals	neral	geranial	CHPDs
No	Lab 1	29	96	nd	nd	nd
No	Lab 2	34	153	nd	nd	nd
Yes	Lab 1	22	17	nd	nd	nd
Yes	Lab 2	39	41	nd	nd	nd

OIL 2: Molecularly distilled cod liver oil with no added vitamins. Significantly lower level of n-alkanals after two weeks found by Lab 2 is probably due to volatility and evaporation during exposure to atmospheric oxygen.



Exposure to Air (14 days)	Site	c,t-alka-2,4-dienals	n-alkanals	neral	geranial	CHPDs
No	Lab 1	74	nd	nd	nd	nd
No	Lab 2	34	nd	nd	nd	nd
Yes	Lab 1	22	nd	nd	nd	nd
Yes	Lab 2	39	nd	nd	nd	nd

OIL 3: Unheated cod liver oil showing n-alkanals on opening and at two weeks.

fermented cod liver oil and speculated that this would indicate an adulteration of the oil with vegetable oils.

However, *trans* fatty acids are a natural component of fish oils; they are manufactured by microorganisms that reside in the fish, including a fungus, *Cladosporium sphaerospermum*, along with several species of bacteria.

Grootveld's lab analyzed all five samples for *trans* fat components and found that all five types contained *trans* fatty acids (see Figure 3). Levels were higher in the fermented cod liver oil as expected, as the bacteria increase production of *trans* fats in the presence of phenols.⁷

Adulteration with vegetable oil is highly unlikely since the fermented cod liver oil shows no signs of oxidation products. The question of whether these marine *trans* fatty acids have health benefits—as do the natural *trans* fats found in the fat of ruminant animals—awaits further research.

VITAMINS IN COD LIVER OIL

WAPF also sent samples of three brands of cod liver oil to two different commercial labs to test for vitamins A, D₂ and D₃: Covance in

Wisconsin and UBE laboratory in California. In general, results from UBE were considerably higher than those for Covance. The results are shown in Figure 4.

As expected, the molecularly distilled cod liver oil had low levels of vitamin A and no detectable levels of D₃ or D₂, because much of the vitamin content, especially the vitamin D content, is removed during the distillation process.

Vitamin A was higher in the unheated and fermented brands of cod liver oil, with the fermented cod liver oil measuring about 30-40 percent higher than the unheated brand. Total retinol plus palmitate for the fermented cod liver oil was 6080 IU/teaspoon, in the lower range of values found by the manufacturer, which have varied between 5,000 and 12,500 IU/teaspoon.

As for vitamin D, neither lab found appreciable levels of vitamin D₃ in any of the three brands. UBE found 540 IU/teaspoon of a form labeled D₂ in the molecularly distilled cod liver oil, and about triple that amount in the unheated and fermented cod liver oils. Levels indicated as D₂ were similar in the unheated and fermented products. The manufacturer of fermented cod liver oil reports a range of 1,500-5,500 IU/teaspoon D₂ in the product.

As discussed in a previous article (*Wise Traditions*, Fall 2015), it is likely that the form of vitamin D identified as D₂ by UBE labs is another, as yet unidentified, form of vitamin D.⁸

These results indicate that the unheated and fermented types of cod liver oil provide similar amounts of vitamin D, while the fermented cod liver oil is a better source of vitamin A.

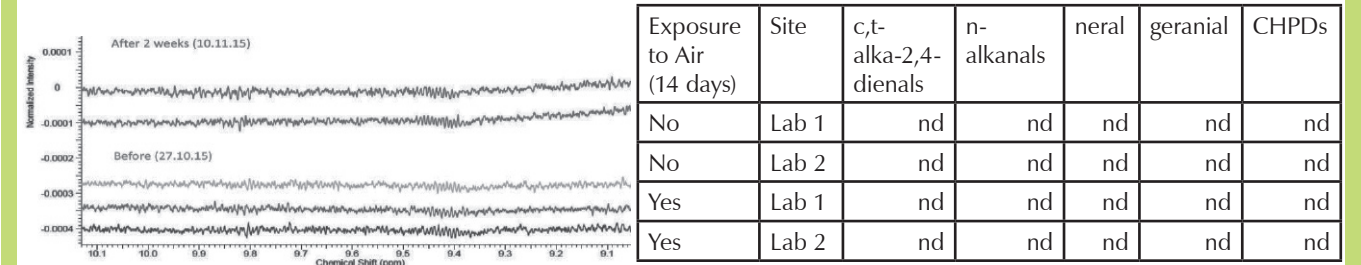
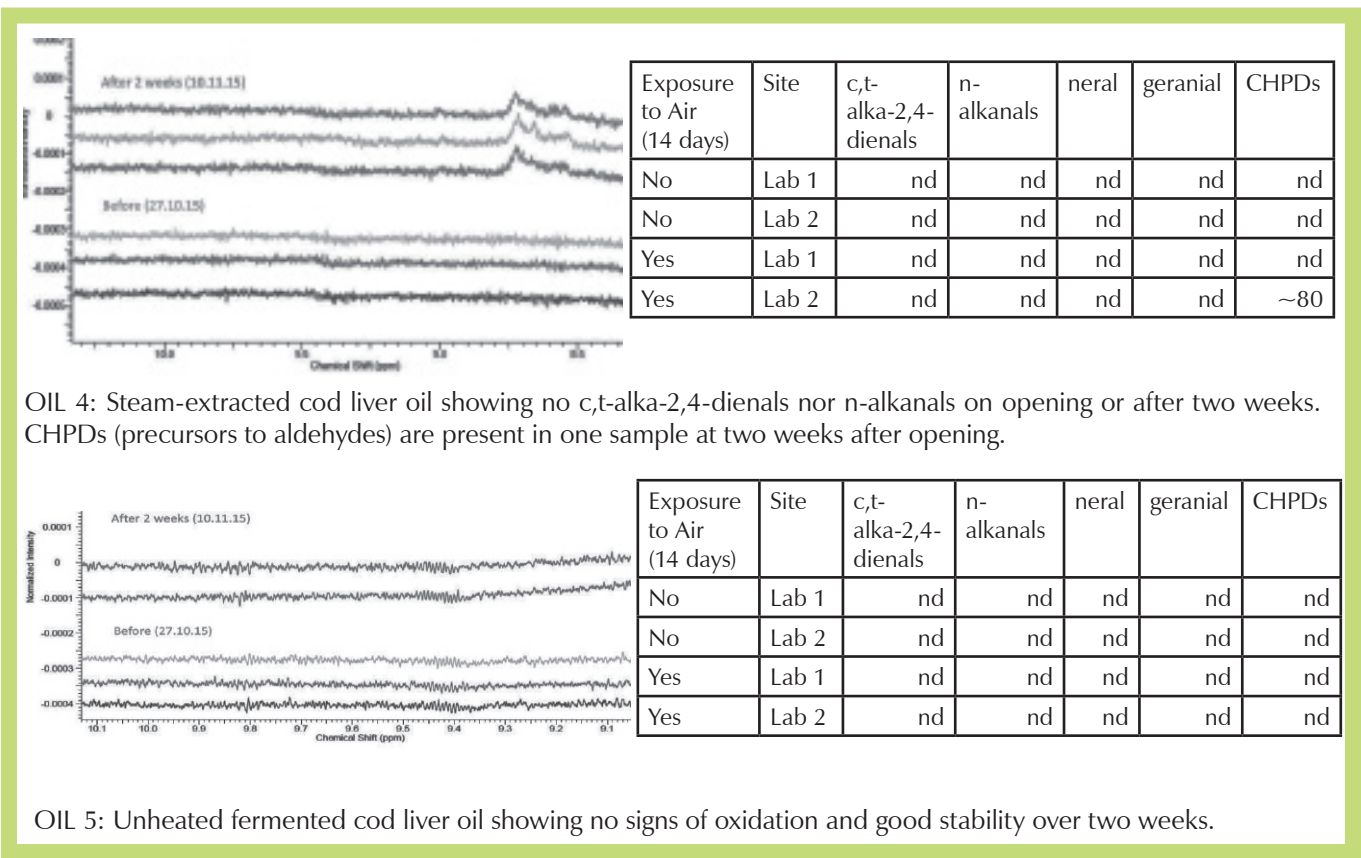


FIGURE 2: DEVELOPMENT OF RANCIDITY IN CORN OIL AND LARD ON HEATING

Results are given in μmole (micromole) per mole of total fatty acids and represent the mean value of $n=6$ determinations.

(Courtesy Martin Grootveld, BSc, PhD, FIBMS, CBiol, FSB, FRSC)

Heating Time (min.)	trans-2-Alkenals	trans,trans-Alka-2,4-dienals	4-Hydroxy-trans-2-alkenals	cis,trans-Alka-2,4-dienals	n-Alkanals
0	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
5	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
10	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
20	240 \pm 60	170 \pm 50	0.00 \pm 0.00	0.00 \pm 0.00	240 \pm 50
30	500 \pm 120	360 \pm 80	0.00 \pm 0.00	0.00 \pm 0.00	420 \pm 90
60	1320 \pm 220	730 \pm 100	380 \pm 70	310 \pm 50	800 \pm 90
90	2330 \pm 160	970 \pm 70	540 \pm 50	370 \pm 30	1110 \pm 70

LARD: Mean \pm Standard Error (SEM) aldehyde concentrations generated in a commercial lard product exposed to thermal-stressing episodes for periods of 0-90 min. at 180°C (350°F) according to shallow frying practices.

Heating Time (min.)	trans-2-Alkenals	trans,trans-Alka-2,4-dienals	4-Hydroxy-trans-2-alkenals	cis,trans-Alka-2,4-dienals	n-Alkanals
0	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
5	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
10	330 \pm 20	280 \pm 20	140 \pm 10	150 \pm 10	310 \pm 25
20	870 \pm 70	820 \pm 70	290 \pm 20	330 \pm 25	660 \pm 60
30	1520 \pm 110	1380 \pm 100	430 \pm 25	480 \pm 330	1030 \pm 90
60	3440 \pm 330	2570 \pm 220	900 \pm 70	810 \pm 80	1870 \pm 230
90	5320 \pm 610	3090 \pm 250	1290 \pm 110	970 \pm 90	2480 \pm 330

CORN OIL: Mean \pm Standard Error (SEM) aldehyde concentrations generated in a commercial corn oil product exposed to thermal-stressing episodes for periods of 0-90 min. at 180°C (350°F) according to shallow frying practices.

FIGURE 3: TRANS FATTY ACIDS IN COD LIVER OIL

Oil 1	Molecularly distilled with added vitamins	2.73%
Oil 2	Molecularly distilled with no added vitamins	2.04%
Oil 3	Unheated	1.85%
Oil 4	Steam extracted	2.48%
Oil 5	Fermented	3.06%

FIGURE 4: VITAMINS A AND D IN COD LIVER OIL

TOTAL RETINOL (IU/TSP)	Covance	UBE	Retinol + Palmitate	
Molecularly distilled, with no added vitamins	305	885	1005	
Unheated	1890	2320	4130	
Fermented	3125	3445	6080	

VITAMIN D (IU/TSP)	Covance D3	UBE D2	UBE D3	UBE D2
Molecularly distilled, with no added vitamins	<4	<2	0	540
Unheated	198	<2	0	1570
Fermented			0	1645

WAPF sent samples of the three types of cod liver oil to VitaK Laboratories in the Netherlands for vitamin K testing. None of the samples analyzed showed appreciable amounts of vitamin K.

TAKING COD LIVER OIL

One individual has reported the development of heart problems after taking large amounts (about three tablespoons per day) of fermented cod liver oil for a period of several years, and some individuals have complained that the fermented cod liver oil causes a burning in the throat. Others have reported that all types and brands of cod liver oil cause nausea or burping. One individual has reported that taking cod liver oil led to food intolerances.

On the other hand, many practitioners report excellent results using the fermented cod liver oil, especially in raising vitamin D levels. This author has found the fermented cod liver oil extremely effective in relieving symptoms of allergy. Many children have thrived on the fermented cod liver oil.

Obviously, no one food will agree with everyone, and no one should take any food rich in chemically fragile omega-3 polyunsaturated fatty acids in excess, especially over a long period. The phenols in fermented cod liver oil may be one explanation for the throat burning—unfiltered olive oil, rich in phenols, can have the same effect. Indigestion and throat burning are also signs of niacin (vitamin B₃) deficiency.⁹

Cod liver oil is rich in vitamins A and D, and in unsaturated fatty acids, especially EPA. Taking generous amounts of vitamins A and D without vitamin K may lead to coronary artery disease, bone problems, tooth decay and gum disease. Large amounts of unsaturated fatty acids that are not balanced by dietary saturated fats may result in low hormone production, cancer, autoimmune disease and many other problems. EPA in cod liver oil without arachidonic acid from animal fats like butter may lead to skin disorders and digestive problems. And while cod liver oil contains DHA, additional amounts may be required from organ meats and egg yolks to balance high levels of EPA in cod liver oil.

Taking cod liver oil is all about balance. In small amounts in the context of a diet rich in egg yolks, butter, ghee or butter oil, cheese, poultry fats and poultry liver, organ meats and saturated meat fats, cod

liver oil usually provides important benefits. This research indicates that all types of cod liver oil pose minimal safety problems when taken in small doses. Molecularly distilled cod liver oil without added vitamins contains very little vitamin D and is not recommended. ☺

Sally Fallon Morell is the author of the bestselling cookbook Nourishing Traditions, along with other titles. She is the founding president of the Weston A. Price Foundation and founder of A Campaign for Real Milk. This article is based on her presentation, “The Fat-Soluble Activators,” given at the 2015 Wise Traditions conference.

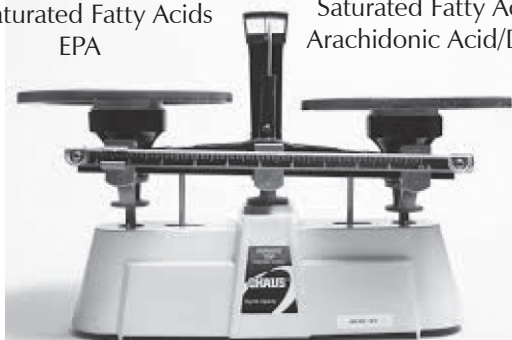
REFERENCES

1. <http://www.westonaprice.org/health-topics/cod-liver-oil-manufacturing/>; <http://www.westonaprice.org/health-topics/cod-liver-oil/constant-controversy/>.
2. <http://drkaayladaniel.com/hook-line-and-stinker-opt-in/>.
3. <http://blog.cholesterol-and-health.com/2015/08/weighing-in-on-fermented-cod-liver-oil.html>.
4. Claxson AW and others. . Generation of lipid peroxidation products in culinary oils and fats during episodes of thermal stressing: a high field 1H NMR study. *FEBS Lett.* 1994 Nov 21;355(1):81-90.
5. Personal communication, Martin Grootveld.
6. Gutfinger T. Polyphenols in olive oils. *Journal of the American Oil Chemists Society.* November 1981, Volume 58, Issue 11, pp 966-968; Velasco J and Dobarganes C. Oxidative stability of virgin olive oil. *European Journal of Lipid Science and Technology.* Volume 104, Issue 9-10, pages 661–676, October 200,
7. Hiroshi K and others. Biosynthesis of *trans* Fatty Acids in a Fungus, *Cladosporium sphaerospermum*, and Some Bacteria Isolated from Fish Viscera. *Biosci. Biotech. Biochem.*, 60 (II), 1888-1890, 1996.
8. <http://www.westonaprice.org/health-topics/cod-liver-oil/vitamin-d-in-cod-liver-oil/>.
9. <http://www.merckmanuals.com/home/disorders-of-nutrition/vitamins/niacin>.

TAKING COD LIVER OIL: IT'S ALL ABOUT BALANCE

Vitamins A & D
Unsaturated Fatty Acids
EPA

Vitamin K
Saturated Fatty Acids
Arachidonic Acid/DHA



Cod Liver Oil

Egg yolks
Butter/Ghee/Butter Oil
Cheese
Bird Fats/Bird Liver
Meat Fats/Organ Meats



Reading Between the Lines

Nutrition Updates by Merinda Teller, MPH, PhD

Lead in the Water: Flint's Cautionary Tale

Historians may disagree about the extent to which the decline of the Roman Empire can be attributed to lead poisoning, but it is common knowledge that the empire used lead in many of the pipes that supplied Rome and provincial cities with water. As a result, Roman tap water contained up to one hundred times more lead than local spring water.¹ Romans also had a variety of other favored uses for lead, including in cookware, drinking vessels, food and wine preservation, and cosmetics. Whether or not lead offers the sole explanation for the empire's decline, it is certainly plausible that chronic lead poisoning contributed to the "creeping cretinism" and "conspicuous pattern of mental incompetence" that came to characterize the Roman elite.²

Fast forward two thousand years to Flint, Michigan, where the city's one hundred thousand residents (including pregnant women and almost eighty-seven hundred children under the age of six) have been unwittingly exposed to dangerously high levels of lead in their drinking water for nearly two years.

In April of 2014, city officials made a cost-saving decision to obtain the city's water from the polluted Flint River rather than continuing to purchase water from Detroit's system (which draws from Lake Huron). This decision brought water that is nineteen times more corrosive than Lake Huron water³ into contact with Flint's old pipes, prompting the release of lead into the tap water.⁴ Although citizen complaints about the water's odor and appearance were initially stonewalled, the massive lead contamination eventually became impossible to ignore. Flint belatedly returned to the Detroit water system in late 2015, but the corroded water pipes continue to leach lead. Experts agree that there is no "safe" level of lead exposure.⁵

On January 16, 2016, officials declared a federal state of emergency for Flint, and Michi-

gan's chief medical executive acknowledged that, from a public health perspective, the entire cohort of children drinking Flint water since April 2014 should be considered as lead-exposed.^{4,6} A study conducted at Flint's Hurley Medical Center, which compared blood lead levels before and after the changeover in water supply, confirmed this population-level exposure, finding a statistically significant increase (nearly double) in the percent of Flint children with elevated blood lead levels.⁷ These stark results likely underestimate the actual risk, because infants were not screened for lead, and the blood lead levels may have peaked prior to the researchers' measurements.⁷ (Lead initially circulates in the blood but then is stored in the bones and major organs.) To add insult to injury, Flint residents are stuck paying water bills for water they cannot drink—failure to pay the bills threatens them with charges of child endangerment because Michigan law considers parents neglectful in the absence of running water!⁸

ONGOING PUBLIC HEALTH HAZARD

Lead from all sources—past and present—never goes away; it lingers in soil, the food chain, and house dust without ever breaking down. As the National Research Council noted over twenty years ago, "Most of the three hundred million metric tons of lead ever produced remains in the environment."⁹ This persistence of lead is cause for concern because lead is a powerful toxin that can affect nearly every system in the body, often without recognizable symptoms.^{5,10} Acute lead toxicity attracts the most attention, but chronic low-level lead exposure is also extremely damaging, causing long-lasting effects that are especially troublesome for neurodevelopment.⁹ Comparing the fondness of both ancient Romans and modern Americans for lead, one author observed:

Lead from all sources never goes away, lingering in soil, the food chain, and house dust without ever breaking down.

Romans of yesteryear, like Americans of today, equated limited exposure to lead with limited risk. What they did not realize was that their everyday low-level exposure to the metal rendered them vulnerable to chronic lead poisoning, even while it spared them the full horrors of acute lead poisoning.²

In 1978, residential use of lead-based paints was banned, and in 1996, the Clean Air Act ended the sale of leaded fuel. Both prohibitions were justifiably celebrated as public health victories. Moreover, the phasing out of leaded gasoline had immediate salutary effects, as Americans' mean blood lead levels dropped by over 75 percent after the ban.¹¹ However, even with the elimination of lead paint and leaded gasoline, the “lead menace”¹¹ unfortunately lives on—particularly in aging municipal water systems.

Recognizing the problems associated with aging lead pipes, the federal Lead and Copper Rule of 1991 requires public water systems to implement corrosion control measures, primarily through the addition of orthophosphates as a corrosion inhibitor. The egregious water crisis in Flint appears to have arisen, in part, because “reckless” and unaccountable officials decided not to treat the Flint River water with orthophosphates.¹² (It should be noted that these

anti-corrosion chemicals have their own set of problems, including causing longer-term harm to surface water quality and uninvestigated effects on human health.) Nonetheless, the lead-damaged children and adults in Flint are far from the only Americans confronting the enduring problem of water-system-related lead toxicity. Lead components of water delivery systems are a potential problem for millions of U.S. homes.¹³ Even the seemingly obvious (though costly) solution of replacing lead pipes can cause myriad unintended consequences because any physical disturbance of lead lines can release lead particles into the water.¹³ It is not surprising, then, that a leading expert at Virginia Tech terms “the widespread risk posed by lead pipes and the astronomical cost to replace them” as “one of the biggest environmental disasters in U.S. history.”¹³

LEAD, CHILDREN, AND POVERTY

Public health officials long ago admitted that their understanding of the health effects of lead is “evolving” and continues to undergo scrutiny as scientists develop more sensitive measures of “biochemical, psychological, and electro-physiological changes associated with relatively low levels of lead exposure.”¹⁴ Nonetheless, all are in agreement that because of their physical immaturity, infants and children are “the first and worst victims” of low-level lead

Even with the elimination of lead paint and leaded gasoline, the “lead menace” unfortunately lives on—particularly in aging municipal water systems.

A DIET PROTECTIVE AGAINST LEAD POISONING

- Good-quality (e.g., organic, pastured) animal proteins, including organ meats, which are rich in: Sulfur-containing amino acids necessary for detoxification; Zinc (protective against cadmium); Taurine (needed to excrete toxic metals via the bile); Vitamin B₅, a key detoxification nutrient.
- Good-quality animal fats, which promote ongoing detoxification.
- Coconut oil (monolaurin is a fat-soluble chelating agent).
- Vitamins A and D (in proper balance with vitamin K₂)—perhaps some of the most important micronutrients for healing and detoxification.
- Cultured and fermented foods to promote the healthy gut flora that strengthen the body's ability to withstand exposure to toxic metals.
- Bone broth to ensure a strong gut lining and provide amino acids that help form glutathione, the body's top antioxidant.

exposure—vulnerable to “systemic and neurological injury, including lowered IQs, reading and learning disabilities, impaired hearing, reduced attention span, hyperactivity, behavioral problems and interference with growth.”¹¹ The relationship between lead exposure and IQ deficits has been particularly well studied, and lead-induced IQ losses may be permanent.¹⁵ Studies also suggest that because 90 to 95 percent of the total body burden of lead is stored in bone, childhood exposure to lead may be associated with osteoporosis later in adulthood.¹⁶

According to conservative estimates by the Centers for Disease Control and Prevention (CDC), at least four million U.S. households are home to children who are being exposed to high levels of lead, and at least half a million U.S. children ages one to five (representing 2.6 percent of

all U.S. children in this age group) have blood lead levels exceeding the threshold intended to trigger initiation of “public health actions.”¹⁰ In addition to children’s direct exposure to environmental sources of lead, exposure can occur *in utero* (lead circulating in maternal blood “readily” crosses the placenta) and through breast milk.¹⁷ Where tap water is concerned, a 2014 study that reevaluated past models suggesting that lead in tap water was not “a primary health risk for a typical child” found that, on the contrary, even low water lead levels pose health

CILANTRO AND HEAVY METALS

Dr. Yoshiaki Omura, MD, ScD. is an adjunct professor of the New York Medical College, director of medical research at the Heart Disease Research Foundation and president of the International College of Acupuncture and Electrotherapeutics. Omura has devoted his career to identifying safe and effective treatments for intractable medical problems such as cancer, heart disease and the side effects of electromagnetic field exposure. Omura agrees that heavy metal toxicity often plays a central role in chronic ill health. In the course of his work, Omura discovered that consumption of cilantro accelerates excretion of toxic metals such as lead, mercury and aluminum.¹⁻⁴ Many natural health practitioners have embraced Omura’s findings and use cilantro as a natural chelator, sometimes in tandem with bentonite clay.⁵

However, Omura currently urges caution with both dosing and the form of cilantro used, stating that raw cilantro and alcohol-extracted cilantro tinctures are counterproductive because they concentrate cilantro’s toxic properties. He recommends that cilantro be boiled and administered in an individually determined “optimal dose” for each person, with the “optimal dose” typically being far lower than one might expect. Omura also testifies to achieving remarkable clinical results with “optimal doses” of vitamin D₃ (on average, 400 IU, one to three times a day, compared with widely used doses of 2000 to 5000 IU) and taurine (175 mg, one to three times a day, compared with 500 mg doses). According to Omura, optimal doses of cilantro, vitamin D₃, and taurine all contribute not only to toxic metal excretion, but also to significant excretion of bacteria, viruses and fungi into urine; improved function of the heart, brain, kidneys and pancreas; and reductions in pain, memory problems, high blood pressure, high blood glucose levels, obesity and cancer activity by increasing markedly reduced acetylcholine and DHEA levels.⁶⁻⁸

1. Omura Y, Lorberboym M, Beckman S. Radiation injury and mercury deposits in internal organs as a result of thallium-201 chloride intravenous injection for SPECT imaging; additional biochemical information obtained in the images of organs from SPECT or PET scans; and potential injury due to radiation exposure during long-distance flights. *Acupunct Electrother Res* 1995;20(2):133-148.
2. Omura Y, Beckman SL. Role of mercury (Hg) in resistant infections and effective treatment of Chlamydia trachomatis and Herpes family viral infections (and potential treatment for cancer) by removing localized Hg deposits with Chinese parsley and delivering effective antibiotics using various drug uptake enhancement methods. *Acupunct Electrother Res* 1995;20(3-4):195-229.
3. Omura Y. Abnormal deposits of Al, Pb, and Hg in the brain, particularly in the hippocampus, as one of the main causes of decreased cerebral acetylcholine, electromagnetic field hypersensitivity, pre-Alzheimer’s disease, and autism in children and their new effective treatment by removing these metal deposits using cilantro and the selective drug uptake enhancement method (Part I). Presented at the 4th International Symposium on the Bi-Digital O-Ring Test, Waseda University, Tokyo, July 21-23, 2000, p. 34. bdort.kenkyuukai.jp/images/sys%5Cinformation%5C20111018182214-9797E30182AD2F165710097D719D830E4DDAC95272045AD1BD9B998044B6D069.pdf
4. Institute for Natural Healing. Doctor accidentally discovers natural chelation therapy in Vietnamese soup. June 3, 2011. instituteofnaturalhealing.com/2011/06/doctor-accidentally-discovers-natural-chelation-therapy-in-vietnamese-soup/
5. Williams D. Detox naturally with cilantro and clay. Dr. David Williams, last updated August 5, 2015. drdavidwilliams.com/cilantro-clay-for-detoxification/
6. Omura Y, Jones MK, Duvvi H, Shimotsuura Y, Ohki M, Rodrigues A. Non-invasive quick diagnosis of cardiovascular problems from visible and invisible abnormal changes with increased cardiac troponin I appearing on cardiovascular representation areas of the eyebrows, left upper lip, etc. of the face & hands: beneficial manual stimulation of hands for acute anginal chest pain, and important factors in safe, effective treatment. *Acupunct Electrother Res* 2014;39 (2):135-167.
7. Omura Y. Non-invasive, quick, safe, accurate, economical diagnostic methods & safe effective treatment of various cancers with elimination of contributing factors for cancers including use of optimal average dose of 400 I.U. of vitamin D₃ instead of harmful 2000 I.U. or higher dose & proper use of electromagnetic field (EMF) neutralizer to protect EMF from cellular phones etc. and control of severe pain with strong (+) solar energy stored paper. Presented at 7th European Congress for Integrative Medicine, Belgrade, Serbia, October 11-14, 2014.
8. Omura Y. Optimal dose of vitamin D₃ 400 I.U. has a significant anti-cancer effect, while widely used 2000 I.U. or higher promotes cancer: marked reduction of taurine was found in various cancer tissues and oral intake of optimal dose of taurine with omega 3 fish oil & cilantro as a new potentially safe and more effective method of cancer treatment. To be presented at the International Cancer Study & Therapy Conference (Cancer-2016), Baltimore, MD, April 4-6, 2016.

concerns, particularly for young children and formula-fed infants.¹⁸

The CDC neutrally notes that children who are living at or below the poverty line in older housing are at greatest risk of harm from chronic lead exposure.¹⁰ The mayor of Flint, who apparently recognizes environmental racism when she sees it, has suggested in interviews that officials were slow to respond to the water crisis because the city's population was primarily African-American and poor.¹⁹ The ugly association between poverty and lead exposure also was brought to light recently in news accounts of Freddie Gray, the African-American man whose death while in police custody sparked riots in Baltimore in 2015. According to an account in *The Washington Post*, Gray grew up in old housing in one of the city's poorest neighborhoods, surrounded by peeling paint, and was reported to have damaging lead levels in his blood in a

lead-poisoning lawsuit that Gray and his siblings filed and subsequently settled.²⁰

Clearly, the best course of action is to prevent lead exposure before harm ensues. One can take steps to mitigate lead hazards in the environment—if one knows about them. However, for Flint citizens who already have been poisoned by lead-contaminated water, incurring possibly irreversible damage, this type of advice offers little consolation.

AFTERMATH OF LEAD EXPOSURE

In this age of rampant exposure to multiple sources of toxic metals—including lead, mercury and aluminum—alert health practitioners increasingly recognize the fact that heavy metal toxicity plays a key role in many chronic health conditions:

Almost all chronically sick patients, regardless of their specific symptoms or diagnoses, have sustained significant exposure to toxic metals. Dose, duration, manner of exposure, biochemical individuality, genetic propensity, diet quality and stress levels combine to determine the degree of ill effects. *Good nutrition is key* [emphasis added] because a deficiency of vital metals will

LEAD, AGGRESSION AND HEAVY METALS

In this era of mass shootings, often instigated by young people, many explanations have been put forth to explain the surge in violence. Could lead be part of the problem? In his wide-ranging book, *The Truth about Children's Health*,¹ Robert Bernardini starts out with a chapter on the “hazards our children face” and begins that chapter with a discussion of lead. The author devotes particular attention to the link between lead, aggressive behavior and violent crime, citing an interesting array of research findings assembled in a 1997 issue of *Rachel's Environment and Health News*.² For example:


- In a study of 301 boys in public schools in Pittsburgh, boys with more lead in their bones “consistently had more reports of aggressive and delinquent behavior and problems paying attention,” and their behavior got worse as they got older.³
- A Virginia study of lead-exposed and unexposed children found that lead-exposed children had more problems with “lying, stealing, running away, and setting fires.”⁴
- A Boston study found an association between lead levels in teeth and “problem behaviors.”⁵
- Increased concentrations of lead in children were associated with a greater incidence of violent crimes 20 years later.⁶

Bernardini also cites the research of Roger Masters,⁷ whose “neurotoxicity hypothesis of violent crimes” posits that “the toxic metals lead and manganese cause learning disabilities and increases in aggressive behavior and the loss of control over impulsive behavior,” and that these interact with poverty, stress, substance abuse, and other social factors to produce violent crimes. According to Masters, neurotoxicity helps explain the variation in violent crime rates by geographic area and ethnic group. As summarized by Bernardini, “When our brain chemistry is altered by exposure to toxins...we lose the natural restraint that holds our violent tendencies in check.”¹

1. Bernardini R. *The Truth about Children's Health: The Comprehensive Guide to Understanding, Preventing, and Reversing Disease*. Clifford, VA: PRI Publishing, 2003, pp. 9-18.
2. Montague P. Toxics affect behavior. *Rachel's Environment & Health News*, #529, January 15, 1997.
3. Needleman HL, Riess JA, Tobin MJ, Biesecker GE, Greenhouse JB. Bone lead levels and delinquent behavior. *JAMA* 1996;275(5):363-369.
4. De la Burd  B, Choate ML. Early asymptomatic lead exposure and development at school age. *J Pediatr* 1975;87:638-642.
5. Bellinger D, Leviton A, Allred E, Rabinowitz M. Pre- and postnatal lead exposure and behavior problems in school-aged children. *Environ Res* 1994;66(1):12-30.
6. Weiss B. Intersections of psychiatry and toxicology. *Int J Ment Health* 1985;14(3):7-25.
7. Masters RD, Hone B, Doshi A. Environmental pollution, neurotoxicity, and criminal violence. In *Environmental Toxicology*, J Rose (Ed.). New York: Gordon and Breach Publishers, 1997.

lead to their replacement by toxic metals in enzyme binding sites. [...] These substitutions...in time lead to physiological dysfunction.²¹

For those suffering from lead or other heavy metal poisoning, a protective diet that avoids processed foods and emphasizes the central components of a nutrient-dense and antioxidant-rich WAPF-style diet is essential (see sidebar page 45).²¹ Nutritional status shapes susceptibility to lead toxicity in important ways, affecting lead's intestinal absorption; its mobilization, distribution and retention in the body; and excretion.²² Because oxidative stress is a likely mechanism explaining some of lead's toxic actions, some investigators have begun to explore whether natural antioxidants and trace minerals may help mitigate lead-induced cell damage.¹⁷ Specifically, researchers in Spain found that administration of vitamins A, B₆, C and E along with zinc modulated some of the negative effects of lead exposure in rat pups, confirming the influence of nutritional factors on health outcomes following lead exposure.¹⁷ Vitamin D also should be a major component of a protective diet. A study of bone lead levels in middle-aged to elderly men concluded that low dietary intake of vitamin D may increase lead accumulation in bones.²² Consuming key micronutrients through a traditionally prepared whole-foods diet (rather than in synthetic form) is, of course, vital. (On other healing fronts, informed use of homeopathic remedies such as *Alumina*, *Causticum*, and *Plumbum* may help antidote exposure to heavy metals, including lead.²³)

Admittedly, the embattled and impoverished citizens of Flint will likely need help to mobilize the high-quality nutritional resources that they and their children desperately need. (Attention, WAPF members in Michigan!) Although Flint citizens' most immediate requirement is clean water, surely it would behoove anyone interested in helping to direct resources toward the nutritional support that stands the greatest chance of improving Flint children's chances for a more resilient future. 

REFERENCES

- Delile H, Blichert-Toft J, Goiran J-P, Keay S, Albarède F. Lead in ancient Rome's city waters. *Proc Natl Acad Sci USA* 2014;111(18): 6594-6599.
- Lewis J. Lead poisoning: a historical perspective. *EPA Journal*, May 1985.
- Ganim S, Tran L. How tap water became toxic in Flint, Michigan. CNN.com, January 13, 2016.
- Associated Press. Federal emergency is declared in Flint over contaminated water. *New York Times*, January 16, 2016.
- World Health Organization. Lead poisoning and health. Fact sheet No. 379, reviewed August 2015.
- Tanner K. All Flint's children must be treated as exposed to lead. *Detroit Free Press*, January 16, 2016.
- Hurley Medical Center. Pediatric lead exposure in Flint, MI: concerns from the medical community. <http://flintwaterstudy.org/wp-content/uploads/2015/09/Pediatric-Lead-Exposure-Flint-Water-092415.pdf>
- Vibes J. Flint residents told that their children could be taken away if they don't pay for city's poison water. The Free Thought Project, January 24, 2016. <http://thefreethought-project.com/flint-residents-told-children-pay-citys-poison-water/>
- National Research Council. *Measuring Lead Exposure in Infants, Children, and Other Sensitive Populations*. Washington, DC: National Academy of Sciences, 1993.
- Centers for Disease Control and Prevention. Lead. Last updated January 29, 2016. <http://www.cdc.gov/nceh/lead/>
- Kitman JL. The secret history of lead. *The Nation*, March 2, 2000.
- Shaw H. Detroit collapsing into third world status as water supply becomes too toxic to drink... America's infrastructure imploding. *Natural News*, January 24, 2016.

- Schmidt S, Hall DJ, Wisconsin Center for Investigative Journalism. Lead pipes, antiquated law threaten Wisconsin's drinking water quality. WUWM Milwaukee Public Radio, February 1, 2016. <http://wuum.com/post/lead-pipes-antiquated-law-threaten-wisconsin-s-drinking-water-quality#stream/0>
- Understanding Lead Pigment Litigation. The history of the use of lead-based paint. <http://www.leadlawsuits.com/history/history-of-the-use-of-lead-paint/>
- Bernardini R. *The Truth about Children's Health: The Comprehensive Guide to Understanding, Preventing, and Reversing Disease*. Clifford, VA: PRI Publishing, 2003.
- Campbell JR, Auinger P. The association between blood lead levels and osteoporosis among adults—results from the Third National Health and Nutrition Examination Survey (NHANES III). *Environ Health Perspect* 2007;115(7):1018-1022.
- Massó-González EL, Antonio-García MT. Natural antioxidants protect against lead-induced damage during pregnancy and lactation in rat's pups. *Ecotoxicol Environ Saf* 2009;72(8):2137-2142.
- Triantafyllidou S, Gallagher D, Edwards M. Assessing risk with increasingly stringent public health goals: the case of water lead and blood lead in children. *J Water Health* 2014;12(1):57-68.
- Seifert S. Flint water crisis: what you should know and what you can do. *The Alternative Daily*, January 23, 2016. <http://www.thealternativedaily.com/flint-water-crisis/>
- McCoy T. Freddie Gray's life a study on the effects of lead paint on poor blacks. *The Washington Post*, April 29, 2015.
- Daniel, KT, Knight GD. Mad as a hatter: how to avoid toxic metals and clear them from the body. The Weston A. Price Foundation, posted April 2, 2009. www.westonaprice.org/health-topics/mad-as-a-hatter/
- Cheng Y, Willett WC, Schwartz J, Sparrow D, Weiss S, Hu H. Relation of nutrition to bone lead and blood lead levels in middle-aged to elderly men: the Normative Aging Study. *Am J Epidemiol* 1998;147(12):1162-1174.
- Calabrese J. Lead poisoning and two homeopathic antidotes: what I would do if I lived in Flint, Michigan. Homeopathy Works, February 1, 2016. <http://joettecalabrese.com/blog/lead-poisoning-and-two-homeopathic-antidotes-what-i-would-do-if-i-lived-in-flint-michigan/>

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Technology as Servant

WIRED HELP FOR THE MODERN HOME: FAVORITE KITCHEN TOOLS

By John Moody

The traditional home kitchen was always a busy place: hauling water, stacking wood, stoking the fire in the cookstove, fermenting, curing, preserving, chopping, grinding, pounding, puréeing and so much more! The amount of work that the pre-modern daily domestic routine required is as astonishing as its results were richly rewarding. This often grueling work, however, was only made possible because of integrated, multi-generational families or communities, or a ready supply of hired help, nearly all of the above drawn from the ranks of the feminine gender. In the modern world, such traditional support systems are, for various reasons, no longer available to most households. Many of us therefore compromise and turn to quick meals made from prepackaged and prepared ingredients, or choose to eat out.

Early in our marriage my wife and I read an excellent book extolling the great advantages of modern gadgets that now take the place of the army of household helpers, especially extended family or servants, that toiled day in and day out in earlier generations. In this column my wife and I will share some of our favorites from the fruits of modern technology, which serve us well in preparing traditional, nutrient-dense foods and meals at home.

INSTANT POT

The instant pot is an electric, programmable pressure cooker. After using the instant pot for just a few months we have come to love it for its ability to quickly and perfectly cook rice and other grains, beans and lentils, and meats and stews.

While some have expressed concern about the effect of pressure cooking on the nutritional value of foods, it appears that pressure cooking may at worst be equal to the effects of regular cooking. Possibly, it may result in better qual-

ity meals. What really affects food isn't a small difference in the cooking temperature, but the amount of time that it is cooked. The longer food cooks, the more certain nutrients are degraded and the greater the increase in certain problematic compounds. Pressure cooking, by using a slight increase in cooking temperature (15 to 20 or so degrees), allows a significant decrease in cooking time.¹ It is probably best, however, to include an overnight soaking stage when cooking beans in the instant pot.

Some studies have shown that pressure cooking retains far more of certain nutrients than almost every other method of preparation,² though more research in this area would certainly be welcomed. Yet given current data, it seems that for busy families, breaking out an instant pot or similar device to save the day should cause no consternation on the part of the cook!

CROCK POT

Until the addition of an instant pot, the crock pot was our go-to helper for a host of meals. We still use it frequently, especially on days when we are away from home and want to return to ready-to-eat food awaiting us. This marvelous machine also allows us to make stock safely overnight or reduce heat gain in the house by relocating our cooking appliance outside during Kentucky's hot summers. Often when we are on the road as a family the versatile crock pot will join us on our trips.

A crock pot is also multi-talented. It will accommodate creating an entire meal or just a few additions or side dishes. It can even make yogurt or herbal tinctures. An endless array of recipes is available online, making learning to use a crock pot exceptionally easy. Coupled with low cost, the crock pot is well worth the investment in your kitchen.

Often when we are on the road as a family the versatile crock pot will join us on our trips.

Transferring hot liquids from cooking pot to blender and back again can be a recipe for emergency room visits or a kitchen in sticky shambles from ceiling to floor.

HANDHELD IMMERSION BLENDER

After a few years of marriage, my wife commented on how this device above all other wired helpers had transformed her life. First and foremost, puréed soups, stews and similar dishes are nearly impossible to produce without a significant mess unless employing this device. Transferring exceptionally hot liquids from cooking pot to blender and back again can be a recipe for emergency room visits or a kitchen in sticky shambles from ceiling to floor. Second, the preparation of smoothies and many other blended mainstays of kid cuisine are made far simpler with a handheld immersion blender, and the added bonus with this method is that older children may safely prepare these treats themselves. Good models are impeccably easy to clean as well, especially compared to the cleanup required for most stand-up blenders or similar kitchen machines.

While significantly more expensive than run-of-the-mill models, a professional, commercial, or heavy-duty handheld blender is the way to go, especially if it will be required to endure arduous duties such as those in our household. Basic models will bog down or die under the stress of thick soups and semi-frozen smoothies rather quickly. Our current model is a Breville, which has held up admirably to the heavy use our household demands, but it does have one small drawback: its design will not allow blending inside wide-mouth Mason jars as will sleeker models.

GRAIN MILL/FLAKER MILL

If you are going to make bread, pancakes, oatmeal, and similar dishes on a consistent basis, few items are as appreciated as a grain mill. Whole grains, once milled, quickly degrade nutritionally. Fragile fats oxidize, some vitamins and other nutrients degrade and even disappear. A grain mill allows you to maximize the nutritional value of this food group by processing the grains just when you need them, while also saving significant money. Most of our friends who invested in grains mills recouped the cost in three to six months of making not only bread, but crackers, muffins, and many other generally more expensive items. Organic grains run between thirty to eighty cents a pound when

purchased in bulk.

We have enjoyed our Family Grain Mill now for nearly a decade and had to replace the milling head only one time in spite of some seasons of extremely heavy use. There are many good models of grain mills to choose from, so do your homework, ask around or, if possible, go visit friends who have one and try it out a few times to find one that works best for you.

FOOD PROCESSOR

With a large family, chopping, slicing and grating can be a real chore and time consumer. “Carrots Vichy” for six with enough for leftovers represents at least four pounds of carrots for our clan. Sweet potato fries require the frenzied slicing of about five or more pounds of sweet potatoes. A high-quality food processor makes bigger meals or batch cooking such as these dishes a breeze and helps prevent repetitive motion injury or insanity for mom, dad and kids.

There is probably a wider array of options under the rubric of “food processor” than any of the other kitchen helpers mentioned in this column. Read consumer reviews to help you decide which model will work best for you and your crew.

TOASTER OVEN

This and the following appliances our family could live without yet we dearly love them nonetheless. The toaster oven is our replacement for a microwave and sometimes also for our regular oven. If you keep your eyes peeled, models often go on clearance sale after Christmas for as little as ten to twenty-five dollars online. A toaster oven allows us to cook or reheat small to medium-sized foods and meals, and during the very hot Kentucky summers we can even relocate it outside to help keep the house cooler. We generally expect approximately three or so years of service out of these machines before they take a one-way trip to our local metal recycling facility. We prefer models that have the convection and speed options, as they cook and reheat more evenly and efficiently than other types.

CHEST FREEZER

We have one inside and one outside, but that is partly because of the buying club we manage and partly because of the bounty from our farm. While some people prefer upright freezer models since they are much easier to keep organized (though my wife contends that there are many upright freezers that rival the potential for disorder of chest versions when in the wrong hands), they generally cost two to three times more per month in energy usage and are far more likely to be left or pushed open accidentally by shifting contents or small fingers. Generally, they also have a higher base cost for the same storage space.

For us, the much likely loss of multiple hundreds of dollars and energy savings makes up for the occasional rooting mess a chest freezer can present. Thankfully, manufacturers have improved the organizational options for their interiors, adding multiple levels of movable baskets and divider systems to many models. If you want a size recommendation, start with a fifteen cubic foot model. This is plenty of room for bulk quantities of pastured beef, pastured chickens, some frozen vegetables and more. Realize that if you are participating in the real food economy, in the fall you will most likely be stocking up on certain larger volume items to tide you over until spring. A chest freezer is an important tool to make this both possible and affordable.

STAND MIXER

While we do far less baking these days than we did in the early days of our marriage, we still find a stand mixer a handy appliance to keep

around. There is no better way to throw together a batch of cookies or cupcakes and it greatly simplifies the process of making homemade bread. We have enjoyed our Bosch Compact for many years. We have also heard great things about Kitchen Aid models that have heavy duty motors. Friends who bake large quantities of bread swear by the Bosch Universal, which is a larger model of the mixer we use and love.

With a relatively small number of kitchen tools and appliances we have been able to prepare food for our growing family that is nutritious, delicious and loved by all. Furthermore, we have been able to avoid convenience foods and have diminished the “need” to eat out. Oh, and one last mechanical servant that is helpful to have around when preparing all this nutritious food is a dishwasher! ☺☺☺

REFERENCES

1. <http://www.foodrenegade.com/pressure-cooking-healthy/>
2. www.nestleprofessional.com/united-states/en/documents/nutipro/2808_nutipro_2_cooking_meth.pdf and <http://www.hippressurecooking.com/3-pressure-cooker-nutrition-myths-that-just-wont-go-away-till-now/>

VACCINE RESOURCES

The following is a list of links to resources relating to vaccine laws, vaccine exemption rights and vaccine injury lawyers. The first is a link to the National Vaccine Information Center's (NVIC) state vaccine requirements page which is updated regularly. The second link is to vaccine exemption rights attorney Alan Phillips. The third group is a list of vaccine injury lawyers with the first in this group being a link to a federal list of vaccine injury lawyers and then links to some of the biggest firms that represent vaccine injury cases.

VACCINE LAWS: NVIC State Vaccine Requirements <http://www.nvic.org/vaccine-laws/state-vaccine-requirements.aspx>

VACCINE EXEMPTIONS: Exemption Rights Attorney Alan Phillips <http://www.vaccinerights.com/attorneyphillips.html>

VACCINE INJURY LAWYERS:

FEDERAL LIST OF VACCINE INJURY ATTORNEYS – list of all vaccine injury attorneys in U.S. <http://www.uscfc.uscourts.gov/sites/default/files/Vaccine%20Attorneys.pdf>

Shoemaker and Associates – <http://www.shoemakerassociates.com/>

Conway, Homer and Chin-Caplan, P.C. – <http://www.ccandh.com/>

Carol L. Gallagher – <http://www.attorneyforvaccineinjuries.com/>

Maglio Christopher and Toale – <http://www.mctlawyers.com/vaccine-injury/>

Curtis Webb – Vaccine Injury Law – <http://www.curtiswebb.com/>

Richard Gage and Associates – <http://www.richardgage.net/>

Andrew D. Downing – <http://nationalvaccineinjurylawyer.com/>

Vaccine Injury Alliance – <http://www.vaccineinjury.org/>

Homeopathy Journal

HEALING “INTRACTABLE” DIGESTIVE DISTRESS

By Joette Calabrese, HMC,CCH, RSHom (NA)

Domenica and her husband own a successful Italian sports car dealership in an upscale part of Rome. She's polished, poised, chic and cosmopolitan. Domenica is “all put together” and exudes sophistication, yet something deep in her viscera is unhappily unsound. She “discovered” this when she complained to her doctor that she suffered abdominal bloating and frequent urinary tract infections. Lab tests revealed an inherited marker for an inability to uptake B vitamins. The medical “sentence” of a genetic defect sounds scary and even permanent.

This sobering news hurled Domenica into a diet obsession in hopes of correcting her heretofore unknown family flaw. She can eat this, but not that. Although her passion had been gourmet specialty cheeses, she was directed to abstain. Not only that, she could no longer eat crusty baguettes, clotted cream in her fine coffee, or her beloved occasional Italian chocolate. In lieu of her epicurean, but always careful diet, she had to take handfuls of supplements, including probiotics and vitamins. Restrictive and unappetizing, her diet became the antithesis of her accustomed practices.

Domenica's story is not uncommon. In fact, I work with clients the world over who suffer ills that are related to gut problems. A large percentage are on or have been on restrictive diets. If the food itself were indeed the culprit, we would expect sweeping dietary changes to correct their conditions. Yet for many they only provide partial recovery. What remains after their proscriptive dieting is what I call the niggly 40 percent. That is, about 60 percent of their health problems improve, but then improvement halts. These individuals have made their entire existence about food, yet in spite of their meticulous choices, their sufferings persist.

I hear the stories of those who so very much want to drink raw milk, homemade kefir, and

similar foods (many are even dairy farmers) but in spite of their special diets, still can't get past being unable to take even a small drink of the stuff. In other words, we've gotten to a layer of the population that is so damaged that even pristine food, perfectly prepared, is not enough. For others the healing process takes too long or they are mothers run ragged and becoming food phobic with all of the dietary restrictions for their children.

It was this conundrum that originally drove me to work in India for three years at the Prasanta Banerji Homeopathic Research Foundation. The first year my intention was to learn how gut-related illnesses are treated employing homeopathy alone. In Kolkata, many people have religious dietary restrictions, which are so varied from one group to the next that the subject is simply not approached by the foundation doctors. Yet nonetheless we observed impressive results in healing digestive disorders.

In a sense practicing holistic medicine with one hand tied behind their backs, these physicians nonetheless cure food intolerances, gut diseases, and the entire fleet of illnesses related to the gut. Given that adherence to a strict diet is not a reasonable therapy option for their patients, the good doctors don't blink an eye. They simply jump right over the question of diet and land happily on the medicine they know has a history of curing the most vicious and tenacious of diseases known to mankind: homeopathy. They employ a method of homeopathy that has been shown to correct food intolerances, despite what the patient eats. To some in the Western world, this seems unlikely given our inexorable dietary conversations about right and wrong food choices. Hence vitamin uptake does not come into the equation. Instead, the focus is on the name of the condition (such as ulcerative colitis) and the symptoms, regardless of how or

These individuals have made their entire existence about food, yet no matter their meticulous choices, their sufferings persist.

why the problem arose.

Indeed, food intolerances and vitamin deficiencies can present in many ways, causing frank gut issues, such as bloating, constipation, irritable bowel syndrome or GERD. However, these problems with the gut can also cause seemingly unrelated illnesses such as ADD, depression, insomnia, menstrual disorders, asthma, and chronic fatigue. With the method I have learned to use and now teach, each of these conditions must be addressed as well as their etiology. If we don't uproot the cause, the condition may reappear.

Food intolerances or vitamin deficiencies inevitably result in symptoms. In homeopathy, symptoms reign supreme as they represent what is occurring on a deeper level. Although always interesting, the cause or reason for the illness is not necessary to know. It can be superfluous, even damaging, for it can cause obsessions. Instead, with a simple, conventional diagnosis based on a few well-chosen, noteworthy symptoms, we can assign a homeopathic protocol to be taken over a period of weeks and frequently witness a lessening of symptoms. However, we do not seek only to alleviate symptoms. The goal is always to read the symptomatic picture, which indicates the complete correction of the condition.

For example, when food intolerances, leaky gut and inability to absorb nutrients present as bloating, gas, a feeling of being overfull, and belly rumblings, the combination of *Lycopodium* 200 mixed with *Arsenicum album* 3 taken twice daily for approximately six to eight weeks will correct the condition fully or partially. If there is only a partial correction (as indicated by the degree of remaining symptoms) then the protocol is repeated for another several weeks and assessed once again. This process is continued until complete amelioration is realized. At this juncture, the homeopathic medicines are halted.

In Domenica's case, she was at first swerved into the wrong lane with the information she received from her genetic tests. In fact the distress this information caused her lasted about four years. During that time she experienced less bloating as long as she adhered to what she called her "sad little diet." Yet it was

finally her meager regime that prompted her to search for another way to approach her food sensitivities and vitamin deficiencies. She learned that the problem was not so much the food or raw materials going into the assembly line of her gut, but the factory itself. This didn't mean that her gut was permanently misaligned—it was capable of correction, in spite of any inherent misfiring.

She also came to recognize that her gut was likely deranged from having taken antibiotics. It dawned on her that her bloating and gas developed within months of having taken an antibiotic for a urinary tract infection. She concluded that she needed to reverse engineer her health. And she did this by employing the homeopathic protocols listed above. Within four months her bloating, gas and burping diminished enough that she added an occasional few bites of her favorite cheese, *caciocavallo podolico*, made from the raw milk of a rare breed of Italian cow. Given the price of this gourmet luxury, no more than that much was warranted anyway. Within about six months and continuing the protocols, Domenica was able to safely enjoy spreading it on sourdough bread every few days. She discovered that as long as she included a fermented beverage or food, she could make this a bi-weekly treat. Each week she's been able to add in *piccola quantita* (a small amount). Once her symptoms abated and she began adding in her treasured foods, she was on her way to genuine food freedom.

In advance of any future challenges, Domenica has purchased homeopathics specific for urinary tract infections so that she will not only be able to treat an infection, but simultaneously protect her gut from antibiotic poisoning. Antibiotics have a way of exposing hereditary weakness that heretofore had not manifested as disease. The genetic characteristic would simply remain in the background, quietly dormant. Only with the stimulation of suppressive drugs do these kinds of inherited genes "turn on" and express disease.

Now when she develops a urinary tract infection, Domenica employs a homeopathic protocol that she's had to use only once. It worked within days. It is *Cantharis* 30, taken twice daily, and *Medorrhinum* 200, once daily. This combination has a history of correcting most urinary tract infections. Using this method has freed Domenica from dependency on a drug that was directly associated with her long-term, chronic condition.

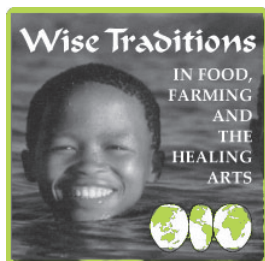


Joette Calabrese is a full time homeopathic practitioner of 20+ years and specializes in gut conditions. She has condensed her methods into one easy-to-follow digital, online course, Good Gut, Bad Gut: A Homeopathic Strategy to Uproot Seemingly Unrelated Illness in Body and Mind. If you're one of seventy million suffering from digestive diseases in the U.S. alone, finally everything is done for you: practical, proven homeopathic protocols that can be learned and used today. www.courses.JoetteCalabrese.com or call (716) 941-1045 to learn more.

Wise Traditions Podcast Interviews

NOURISHING TRADITIONAL DIETS

With Sally Fallon Morell



Hilda Gore: I'm your host Hilda Labrada Gore. And today our guest is the president of the Weston A. Price Foundation, Sally Fallon Morell. Sally's book *Nourishing Traditions* came out in 1996 and has been a driving force behind today's real food movement. In the book and in today's interview, Sally emphasizes the importance of eating a nutrient-dense diet as traditional cultures have done for millennia. It's a way of eating that nourishes, satisfies, and maximizes your health.

I want to take you back to before the Weston A. Price Foundation was even set up, back to when you lived in France. I want to hear a little bit about your health story and how you stumbled across these Weston Price findings.

Sally Fallon Morell: I'll go back even farther to my childhood, because both my parents were very healthy. They had naturally straight teeth, perfect eyesight and no health problems. I remember my father at the dinner table saying, "I just don't understand why your mom and I have straight teeth and perfect eyesight and all you kids need braces and glasses." So he planted that seed of inquiry in me, just asking that question. And I did have a lot of health problems. Not only did I need braces and a very strong prescription for glasses, I also had a lot of allergies, fatigue and challenges in dealing with stress. So I was like that first generation of Pottenger's cats. While we ate real food in our family—my mother always used butter—we also ate a lot of sugar. I wasn't getting cod liver oil and we didn't eat liver or raw milk.

Fast forward to college. I went to France to do a year abroad and while there I discovered a food I'd never tasted before: pâté, goose liver pâté. When I had my first bite of this food my body said, "This is what you've been looking for."

I felt a sigh of relief and couldn't eat enough pâté. In fact, I made a pig of myself, eating it every day. I was a *gourmand*. It made me feel better, gave me energy; I got a lot more done and had less fatigue. And I'm sure that's the reason my first child was so healthy because I had built up my stores of vitamins A, D and K. There is no food that is a better source of A, D and K than goose liver pâté. And then after she was born I discovered *Nutrition and Physical Degeneration* by Weston Price. It is one of those life-changing books. I continued to eat this way—with lots of butter, cream, eggs and pâté—and cook this way as well. I've always loved to cook, especially in the French style, making broth, sauces and soups. I continued like this and my three other children, who were boys, were all very healthy as well.

HG: It sounds like you had a Julia Child experience.

SFM: Oh yes, Julia Child was my idol and I learned to cook from her books. Anyway, after my youngest child went to kindergarten and I had more time, I got the idea of doing a book that would put Dr. Price's findings into practical form. Also, this is when we started to hear a very strident message for low fat, no butter, no cream, no eggs, especially for children. I knew in my heart that was wrong. Fortunately when I was working on my book, I met Mary Enig and we started to collaborate. I call her my fat guru. Mary Enig was a PhD in nutrition with an emphasis on lipids, and she was the wonderful brave person who challenged the safety of *trans* fats. She insisted we should not be using them; we need animal fats, she said, and there's nothing wrong with saturated fat, it's good for us. So we made quite a team. She was the scientist with a tremendous conviction that we were go-

Hilda Labrada Gore, a mother of four, has been involved with WAPF for over ten years and is the chapter leader for Washington, DC. She went to Kenya last summer on behalf of WAPF. She is the director of communications for Body & Soul, a worldwide fitness organization. She also plays the guitar and is the contemporary music leader at National Presbyterian Church.

ing in the wrong direction, and I was able to give her a voice through our writings. After we finished the book, then we thought we would need to provide ongoing information for people, and that's when we set up the Weston A. Price Foundation.

HG: Tell us the name of the book.

SFM: *Nourishing Traditions* was our book. It came out in 1996 and then another edition in 1999. It's sold beyond my wildest expectations and influenced a lot of people.

HG: It includes some science and some recipes—a little bit of everything, even stories.

SFM: Recipes, stories. There's a fairly lengthy introduction, about sixty pages that talks especially about fats and oils, followed by over five hundred recipes. On every recipe page, there is a sidebar with a little bit of information about fat, traditional diets, Dr. Price or about the particular food that's in the recipe.

HG: Now tell us the subtitle of the book.

SFM: The subtitle of *Nourishing Traditions* is: *The Cookbook that Challenges Politically Correct Nutrition and the Diet Dictocrats.*

HG: Because you could already see this impending wave of information, right?

SFM: Or misinformation coming. Actually, we were already in the middle of this wave of misinformation. Mary and I thought, somebody has got to speak out. So that's what we did. The number one job of the Foundation has been to correct the misinformation about fats and oils.

HG: Tell us more about the principles. Let's say I'm just getting started and I'm thinking that this appeals to me. Pâté sounds great and you have the science behind why it's good for you, too, so what would I get do if I wanted to get started on this stuff?

SFM: The first thing we say is, "Get your fats

WISE TRADITIONS PODCAST OFF TO A GREAT START!

Have you started listening yet? Even if you've never listened to a podcast, now is a great time to start! The podcast, like our journal, contains terrific, relevant information from leading health and wellness experts. The information comes in short thirty-minute episodes that are easy to listen to and easy to share!

Here are some of the comments from our listeners:

"These are a must for anyone who cares about their health, their food, and the generations to come." ~Jab1078, iTunes review

"The Weston A. Price Foundation has really been the silent catalyst for the real food movements that are so popular today (Paleo, Primal, etc.). I am SO excited that WAPF is joining the podcast world. This information from the source is so powerful and will be shared with lots of friends, family, and community members. A great listen!" ~Deep roots nutrition, iTunes review

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"Just got caught up with all the episodes, and I'm such a huge fan of what you're doing! I feel like I get so much good information and wise counsel from people who have spent so much of their lives looking into these issues." ~Tim Gregg, via email

These are just a handful of comments, representing thousands who are listening! We are so encouraged by the numbers. In two months of podcasting, we've logged over forty thousand downloads! The show is doing so well that iTunes has categorized our podcast as "New & Noteworthy." And our stats indicate that the audience is growing at a steady rate. Also, our listeners hail from all over the world: the U.S., Canada, Australia, U.K., New Zealand, Ireland, and more! It seems everyone is hungry for this life-giving information. There is something for everyone—from the long-time WAPFer, to the person who is new to the idea that food can bring healing. The guests are top-notch! In the weeks and months ahead you will hear from Joel Salatin, Allan Savory, Leslie Manookian, Sally Fallon Morell and others.

right.” So use butter. Throw away all the margarines and spreads. Use butter and cook in animal fats. Another important thing is to make your own salad dressing. Throw away that bottled dressing which is one of the worst products on the grocers’ shelves. Get those industrial fats and oils out of your diet. Honestly that’s more important than tackling the sugar. That comes next but first get your fats right. Start cooking and using the right fats, make your own salad dressing using real olive oil. That comes first. Then the next thing is get off all the sweeteners—sugars and artificial sweeteners. We’re not saying never eat sweet things. You have a sweet taste in your mouth—it needs to be satisfied but in the right way. We like to say that our diet is not so much telling you what not to eat but *how* to eat everything. We’re inclusive, not exclusive.

HG: So it’s not about deprivation.

SFM: No, it’s not about deprivation or renunciation. This diet is really a fun diet. It’s delicious and satisfying. You can have fats, you can have butter, you can have sauces, you can have salt, you can have meat, you can have grains, and you can even have sweets in your diet.

HG: Let’s go back to step one about the butter and the oils. When I go to the grocery store I see vegetable oil. Oh, vegetable, it sounds healthy, or I see that it says “heart-healthy” on the bottle. Are you telling me it’s not so much?

SFM: I’m telling you that these oils are poison. And isn’t that interesting, they really should be called industrial seed oils but they pick the word vegetable because what can be wrong with vegetables, right? So they call them “vegetable oils” instead. Right there is a deception. They don’t come from vegetables, they come from seeds that normally don’t give up their oils. A piece of corn or a soybean—you couldn’t get oil out of those seeds. They have to use very high-temperature presses and then hexane to get all the oil out of the seed. It’s a very industrial process and these oils are extremely fragile. When they’re exposed to heat and oxygen, as in processing or cooking, they create free radicals. And this is the bad thing in the diet; it’s not

cholesterol, it’s not saturated fat. It’s the free radicals in liquid vegetable oils along with the *trans* fats in partially hydrogenated oils. These are what cause heart disease. Free radicals damage your arteries, they take energy away from your heart. Yes indeed, they are very much involved in heart disease and cancer. They’re definitely carcinogenic.

HG: We get to move away from those to stuff that tastes better anyway—butter, olive oil, coconut oil, and saturated fat.

SFM: Duck fat, goose fat, lard are wonderful fats too. I even use bacon fat. And for fried food, you need to use tallow, which is a safe and stable fat. The problem is people have been subjected to so much propaganda over the years. Our young people, have gotten this in the schools from when they could first talk practically, so there’s a big hurdle to get over. I’ve had people tell me, “First I had to learn not to feel guilty for eating butter.” And I understand that. It’s like people telling you that if you eat bacon, you’re causing climate change. There’s this finger-wagging all the time.

HG: So we get the butter, we get the better fat. The next thing you said is avoiding sweeteners. What are you talking about here?

SFM: We’re talking about refined sugar and high fructose corn syrup and its cousin agave, which are even worse than sugar—especially in the amounts that we eat them today. Again, we’re not telling you not to eat sweet things. We recommend natural sweeteners in the context of a healthy diet and in limited amounts. Not the huge amounts that people are eating today. People say they can’t do that, they can’t give up their sweeteners or their sugar, but one thing that we find, if they get their fats right they don’t crave the sweeteners as much. I had a wonderful story from a girl with this bad habit. She said, “I was on your diet, I was eating whole food but every time I went to the supermarket I stood in the cookie aisle, and I decided that I would always buy two packages of cookies and then eat them.” One day after being on our diet for a number of months she went to the cookie

It’s a diet
that we can
live with for
a long, long
time, for
generation
after
generation.

aisle, she stood there, and she realized she didn't want those cookies. It was not will power. It was just realizing: I don't want these. She was able to turn around and walk out of the cookie aisle without exercising any will power.

HG: There is a certain satisfaction with eating this way where there's no longer a temptation to eat some of the junk we used to eat.

SFM: That's absolutely true and I found that with myself. I was a terrible sugarholic and I didn't recover as quickly as my friend. It took me a number of years, but today I look in that cookie aisle and I'm not even tempted to go down it. It almost makes me nauseous to think about that kind of food. I couldn't put it in my mouth.

HG: Isn't that interesting. You've changed a lot.

SFM: Yes, and it's not because I'm being strong or having a lot of will power. It's just that I don't feel like it. And that's where we need to be. We can't live in a way that it's always an exercise of the will. First of all, it makes you a very grumpy person. And with eating too. Eating is supposed to be pleasurable. Three times a day you sit down to something that you really like, and fortunately our food is very likeable.

HG: Absolutely. I'm thinking about that pâté story you told. When you eat these foods you don't even need to know all the science behind it. You take a bite of something and you can sense that it's genuine and good. I used to buy artificial spreads thinking I was doing my children a favor. Oh, this says "low in fat" or whatever, and I didn't realize how bad it tasted until I switched to butter. Now I'm living the good life and putting it on things knowing it satisfies and it's just so tasty too that my body says thank you.

SFM: Your body does say thank you. It heaves a sigh of relief. It's interesting about the pâté. Today I can't eat that much pâté. I'll have a couple of spoonfuls and I'm full. I was so depleted before that I just kept eating it. A lot of people tell me that when they give themselves permission to eat the good fats it's bingeing and

splurging for several months because the body is finally getting what it needs. But then the bingeing tapers off and you don't eat so much.

HG: A minute ago you said that this isn't really a diet, which sounds amazing to me. It's not about deprivation and yet there are principles that would be helpful for us to follow. Are these based on Price's findings?

SFM: Yes, we have eleven basic principles. Some of them are based on Dr. Price's work, but others we have added based on our own research. For example, grains. Dr. Price described people eating grains but he never talked about how they were prepared. Of course, grains are a big issue today because so many people cannot consume them, especially wheat. And what we show is that traditional cultures always soaked or fermented their grains first. Dr. Price never talked about that. This comes from other research.

HG: Interesting. Can you tell us some of the other principles?

SFM: So one of them is proper preparation of grains. Another interesting principle has to do with cooking. Should we cook? All traditional cultures did cook most of their food especially the plant food. But all traditional cultures also ate at least some of their animal foods raw. So raw meat, raw liver, raw fish, or fermented fish or raw dairy. And one of the reasons that we need this raw animal food is to get vitamin B₆ because it's destroyed by heat. Steak tartare, carpaccio—what delicious ways to get your B₆!

HG: My eyes are wide because I don't eat a lot of raw things although I do drink raw milk. How would you get started on that? Talk to the novice out there. How do you incorporate raw animal products in your diet?

SFM: First of all, consume raw milk if you can get raw milk. We're big proponents of raw milk. Raw milk is a great source of B₆ and we know from animal studies that when you pasteurize raw milk B₆ is no longer available. And then my favorite raw meat dish is carpaccio. Order it in the restaurant some time. It's very thin slices of raw beef usually with a little sauce on it.

HG: Is pâté raw?

SFM: No, pâté is not raw, but steak tartare is raw and sort of tastes like pâté.

HG: This is fascinating, Sally. Tell us more about some of the basic principles based on Price's findings.

SFM: There were four that Price found. One was that there were no processed foods in these diets. Number two, all the diets contained some animal foods. In some cultures there was little animal food and in some cultures there was a lot of animal food. There were no vegan cultures and really no vegetarian cultures. They ate seafood, meat, dairy—even

insects, which is a very important food. In fact, for some people that's their only animal food, they prized the insects. That's a very important principle, and this is why we make a point that we think veganism is very dangerous. We're not afraid to say this because a lot of people get sucked into this argument that they'll be healthier or more spiritual if they're vegan. No, it's just not true. All traditional cultures, and some very spiritual traditional cultures, ate animal foods. And then the last principle of Dr. Price was that they made preparations for pregnancy by special foods for both the father and the mother for about six months before pregnancy to build up their nutritional stores before conception. So typically it would be the six months before marriage where they would consume these special foods. For example, the American Indians considered bear fat important for fertility. Fish eggs were another fertility food; liver was another. While they were pregnant they continued with these foods, they continued them through lactation and then gave them to the child while he or she was growing. This ensured good nutrition for every member of the tribe or village. Another important practice was child spacing. The mothers put three years between each child. They didn't get pregnant for at least two years after they had had the child. This allows the mother to recover her nutritional stores and not get exhausted with each child. And of course that fourth principle is the one we talked about earlier, the principle of nutrient density, especially high levels of vitamins A, D, and K. Those are the four principles discovered by Dr. Price. We've added others to these four, for example the proper preparation of grains and some raw animal food in the diet. As for lacto-fermented foods—they're in every traditional diet all over the globe.

HG: Can you give some examples?

SFM: Sauerkraut is one. I learned recently that there are more good bacteria for our guts in one spoonful of sauerkraut than in a whole bottle of probiotic pills. I had a woman come up to me recently who said that she had suffered from irritable bowel syndrome for twenty years. She had tried everything short of surgery and suffered tremendously from this. Three weeks on real sauerkraut and she had no more problems. It was cured. You're not supposed to say "cured," but she was cured. So all traditional cultures had fermented foods and this practice has been completely validated by the science. We now know that we need to feed and nourish the good bacteria in our guts.

HG: What other principles have you included?

SFM: Another principle is the use of bone broth. Now, this is not universal but it's almost universal. We find this in traditional cultures all over the world. Broth is basically melted collagen. It's the other main type of protein in our bodies. We have muscle protein and collagen protein. In fact we have more collagen protein than muscle protein. Collagen is what holds us together, keeps our organs working, gives us nice skin and gut integrity. Broth feeds that collagen in our bodies and it has many other uses. We like broth in the beautiful gourmet reduction sauces or in soups or stews. We have taught people and encouraged people to use broth a lot in their diets.

HG: I think if people look at their ancestry they'll remember either their grandmother or know of people who have made soup when people are sick, or just consumed soup regularly. So I don't think this is too foreign of a concept.

SFM: No. And of course the broth is made from bones. That's the key point. Bones with a lot of cartilage in them that melts into the water and that's what feeds our own collagen and cartilage.

Another principle is salt. All traditional cultures had salt and went through a lot of trouble to get the salt. We do need salt, it's a very important part of our diet.

HG: I hear a lot of people say, "Gotta watch my salt." Is that some of the misinformation?

SFM: It is. We actually eat less salt, about half as much salt as we did in 1900 because in those days we used salt for salting fish and meat to

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preserve it. Our requirement for sodium is one and a half teaspoons of salt per day. And that's about what Americans are eating today. One of the good things about the modern diet is that salt is readily available and cheap.

HG: Why have we been told that it's not good?

SFM: It's complicated. I think some people are just so tied to their idea. This push for low salt is coming from just a few scientists. They all support each other and reference each other. But we really do need salt and more is better than less. I'm particularly concerned about withholding salt from children because you need salt to form glial cells in your brain. These are the cells that make you capable of higher thinking, of creative thinking. Pregnant women should be eating salt. They should be getting a lot of salt while they're nursing. We need to put salt in baby food. Babies need salt. I'm very concerned about these baby books that say don't give salt to babies.

HG: What about vegetables, Sally? What role do they play in the diet?


SFM: That's an interesting question because some cultures had no vegetables. The Swiss, Irish, and Eskimo cultures that Dr. Price studied had no or very few plant foods in their diets and they were perfectly healthy. Vegetables are not a requirement, but of course they're fun to have in the diet. And I like to say that vegetables are the perfect vehicle for butter. I'm very concerned about people eating a lot of raw vegetables that shouldn't be eaten raw. Of course the favorite today is kale. People are eating kale chips or they're using raw kale in salads or juices. Kale is full of oxalic acid, it's full of goitrogens. I just got a letter the other day from someone who grew up eating lots of kale, and she now has a thyroid problem. It can really cause thyroid problems. Yes, people had kale in their diets but

they cooked it. They cooked it a long time and they cooked it with fat. Think of the southern greens.

Again, that's a tradition that we need to respect when we eat these various foods. The whole problem is we've taken these foods out of their context. We're eating kale raw; traditional cultures would never eat kale raw, it doesn't taste good raw anyway. They are pasteurizing the milk when traditional cultures never did that. They drank milk raw straight from the cow. Soy in traditional cultures is fermented for a long, long time and only eaten in small amounts. We are processing soy in a completely different way and eating it in large amounts. We need to respect these traditions—they're very wise. We may not understand them but if we look long enough, we'll come to find the reason that people prepared their foods in a certain way.

HG: This is fantastic. I'm so glad we're going to do future podcasts on each of these principles—the ones Price discovered and the ones the Foundation has added—to learn more about how to incorporate these foods into our diet to live a full life. Are there any comments in closing that you want to share with our listeners?

SFM: I just would like to stress again, Hilda, that this diet that we talk about and teach people about is not hard. It's delicious, it's satisfying, it's nourishing. I want to say it nourishes your body and soul. It's a diet that we can live with for a long, long time, for generation after generation. There's nothing faddish about this diet. It is the way that people have always eaten and that's the way we need to eat into the future—if we're going to have a future.

HG: I hope we will. Thank you, Sally, and I appreciate your time today. 

This diet that we talk about and teach people about is not hard. It's delicious, it's satisfying.

PODCAST POSTCARD

A postcard has been inserted in the journal advertising the *Wise Traditions* podcast. Please use it to help us get the word out! You can put it on your fridge to stimulate conversation with family and friends, or give it to a vendor at a farmers market, owner of a health food store or a health practitioner. Please make use of it, one way or another! If you'd like more copies, please email us at info@westonaprice.org.

Food Feature

WHOLE GRAIN EINKORN SOURDOUGH

By Min Kim

Two and one-half years ago I began my quest to make the best loaf of sourdough bread for my family. My daughter was suffering from multiple sinus infections. A year after placing her on the GAPS diet and healing her gut, she was finally ready to have truly fermented sourdough bread. Unfortunately, bread made without commercial yeast was very difficult to find, so I decided to take matters into my own hands. After two months of daily experimenting, I was able to achieve a wonderfully light loaf of sourdough bread; one that was mild in flavor with a moist, open crumb and great keeping quality. What I didn't know at the time was that once I started on this bread-making journey, I would soon find myself immersed in the tradition that surrounded this craft and the endless possibilities with ancient and heritage grains.



Einkorn is the original unhybridized wild wheat that grew in the Fertile Crescent of modern day Iraq and Syria. It produces well in harsh conditions due to a strong root system, allowing it to uptake more nutrients from the soil. This ability makes einkorn superior in nutrition, containing higher levels of lutein, iron, phosphorus, potassium, thiamin, beta-carotene and vitamin E, to name a few. It also has 30 percent more protein and is 15 percent lower in starch than modern wheat. Until recently einkorn has been unpopular to cultivate commercially due to its low yield (just twenty percent of modern wheat) and its small size (one-third the size of modern wheat kernels). It also has a durable husk which protects the grain against mycotoxins and the formation molds (a common problem with wheat) that must be removed for human consumption, adding another step to the

Einkorn produces well in harsh conditions due to a strong root system that allows it to uptake more nutrients from the soil.

THE BEAUTY OF EINKORN

Enter einkorn. I had heard about this grain but had shied away from it, mostly because of its cost and difficulty to obtain. Fortunately for us, there has recently been a great movement of artisanal bread crafting in this country. And the farm-to-table movement, which originally focused mainly on produce and meats, has expanded to include grains as well. More farmers are willing to grow ancient and heritage grains instead of the high-yield modern wheat varieties, and bakers are willing to pay for these specialty grains because of their superior qualities and flavor.

harvesting process.

Many books on bread baking consider einkorn flour unsuitable for making bread. To understand why, we need to look at the nature of gluten. Dry flour doesn't actually contain gluten, but two proteins, gliadin and glutenin. These two proteins form gluten when mixed with water or other liquid. It's a gluey network that gives dough the ability to trap air bubbles, aiding in the leavening of bread. Gliadin provides the dough with extensibility, which is the ability of the dough to stretch. Glutenin helps with the development of dough structure, providing elasticity, which is the ability of the dough to

bounce back after being stretched. Einkorn is low in glutenins and contains a more brittle form (low-molecular-weight glutenin) compared to modern wheat, which is higher in strong glutenins (high-molecular-weight glutenin). This brittle form of glutenin, however, makes einkorn easier to digest. The gliadin-glutenin ratio of einkorn is 2:1, compared to modern hard red wheat, which is 0.8:1. This ratio means the einkorn makes a very slack dough that is more difficult for the baker to work with.

This aspect of the grain presented a challenge for me but I was fortunate enough to take a bread workshop with one of my bread heroes, Dave Miller. Dave runs his bakehouse out of his garage in Chico, California and has a passion for ancient grains. He inspired me to give this grain a try. The method I use today is a variation of his original formula.

After doing more research, I also learned that people who are extremely sensitive to other forms of wheat are often able to digest einkorn very well.

An interesting note for celiac disease (CD) sufferers is the fact that einkorn does not contain the alpha-gliadin genes on wheat chromosome 6D, which are found in modern wheat and which trigger an autoimmune response. There are more studies showing promise for einkorn being a new grain option for CD sufferers and gluten-sensitive individuals. Adding sourdough culture to this type of flour amplifies the superior qualities of the grain. When dough is acidified with a sourdough culture, the pH level is similar to that of germination and activates the phytase found in the bran, deactivating phytic acid and eliminating its adverse effects. Phytic acid binds nutrients in the grain for the plant's growth but can interfere with the body's ability to absorb calcium, iron, zinc, magnesium and copper. Once deactivated, the nutrients are made available for our bodies to absorb. This type of bread also provides us with prebiotics, which feed our good gut bacteria.

Einkorn has a wonderful sweet flavor and eating it makes you feel truly nourished. It has become my favorite bread to make and eat.

THE STARTER

First you need to establish a sourdough

starter. I prefer using a stiff rye starter. Rye is very high in nutrients and fermentable sugars. With the challenges of dealing with such a slack dough as einkorn, this type of starter is more potent for raising bread, especially whole grain loaves. It is very difficult if not impossible to begin a starter with all-purpose flour.

Within a week your starter should be ready to use for making bread, although it will be more reliable and have a better profile of flavors by week three. In the first week there will be more homofermentative bacteria (lactic acid with an abundance of yeast) and in a few weeks, more heterofermentative bacteria (lactic acid and acetic acid for a better balance of yeast and bacteria) will have taken hold, giving the bread more complex flavor. Once established, you can continue to feed the starter with your flour of choice as well as adjust the hydration to your liking.

A note on measuring: I always recommend investing in a digital scale that measures in grams and that can be zeroed out. It is truly an invaluable tool and allows for consistency, uniformity and accuracy that measuring by volume cannot provide.

Mixing by hand will add more bacteria and yeast to your culture in a positive way but is not necessary for success.

Ingredients:

Whole grain organic rye flour
Spring water/filtered water

Tools:

Digital scale
1-quart Mason jar

Day 1

- Mix 100 grams whole grain rye flour and 160 grams water with a wooden spoon or chopsticks.
- Cover with lid and allow to sit for 24 hours. Place jar in an area where room temperature will remain consistently between 75°F- 80°F (24°C-27°C). You can also use slightly warm water when mixing. Mixture should double and fall.

An interesting note for celiac disease (CD) sufferers is the fact that einkorn does not contain the alpha-gliadin genes on wheat chromosome 6D, which are found in modern wheat and which could trigger an autoimmune response.

Day 2

- Stir and discard 130 grams of mixture.
- Add 100 grams whole grain rye flour and 160 grams water and mix well. Cover with lid and let it sit for 24 hours.

Days 3-6

- Increase feedings to twice a day. Each time, stir mixture and discard 130 grams of starter and add 50 grams of whole grain rye flour and 80 grams of water and cover. Mixture should smell sweet and yeasty, and be doubling and falling with each feed.
- Scrape the inside of your container clean with a rubber spatula and mark the level of freshly mixed starter on the outside of your container with tape or a rubber band so you can track the activity.

Day 7

- At this point you should be able to feed your starter with a larger amount of flour.
- In a new container, measure out 50 grams of starter. Add 100 grams organic flour (50g wheat/50g rye) and 100-120 grams water and watch to see if the culture doubles and falls. You will be feeding this twice a day. It'll be ready to use for bread, but will take 2-3 weeks for best results for bread making.

STARTER MAINTENANCE

You should maintain your starter at room temperature and feed once a day. This style of starter may be different from what you are used to but is a more forgiving method than a liquid starter. It looks like a baseball-sized ball of dough that is kept buried in rye flour. Being surrounded in flour keeps it from drying out and provides additional food for the starter ball. It also promotes a very sweet flavor to the culture.

You will need:

- 1/2 gallon airtight container
- whole rye flour
- spring/filtered water

Ratio of feeding:

- 100g whole rye flour
- 50-60g starter
- 60g spring/filtered water

Directions:

1. Set an empty bowl over your scale and zero out the weight.
2. Dig out your starter ball and scrape the excess flour from your starter ball into the bowl. Add more rye to total 100 grams. Zero out the weight.
3. Remove and discard the outer dry layer of the starter ball and add 50-60 grams of the soft inside of the starter to the bowl. Zero out the weight.
4. Add 60 grams of spring/filtered water to the bowl. Mix and form into a ball.
5. Bury the ball of dough back into the rye flour in your container, covering with more flour if necessary. Replace the flour that surrounds the starter ball with fresh rye flour every month, using the older flour for feedings.

WHOLE GRAIN EINKORN SOURDOUGH BREAD RECIPE

Supplies:

- Digital scale that measures in grams and can zero out
- Instant thermometer
- Large glass/ceramic bowl
- Dough scraper
- Bench knife
- 2 bread pans (ceramic or glass)
- Oven mitts (heat resistant up to 500° F)



Stiff rye starter



The levain

- Oven thermometer
- Grain grinder (optional)

The instant thermometer is helpful for taking water temp. Since the ideal ambient temperature for dough development is 75-78°F, if weather is cooler or warmer, you can adjust water temp accordingly, e.g., if it's 58°F in your kitchen, use 75°F water, if it's 85°F, use 57°F water.

Step 1: The levain build: building a population of wild yeast and bacteria:

Formula:

- 16g stiff rye starter
- 52g spring/filtered water
- 80g whole grain einkorn flour

In a straight-sided 16 ounce Mason jar, mix above ingredients the night before making bread, approximately 8-12 hours ahead of time.

Mixture will double. (During hotter months, use very cold water.)

Step 2: Building the dough:

Formula:

- 810g spring/filtered water
- 135g levain
- 900g whole grain einkorn flour
- 18g Celtic sea salt

Directions:

1. Mix water and levain first, breaking up the levain by hand. Add flour and salt, and mix by hand, making sure there are no dry clumps of flour. Cover and rest 1 hour.
- If you are using fresh ground grain, you will want to cool the flour on parchment paper before use. Otherwise, it will elevate the temperature of the dough, causing too rapid fermentation. Fermentation also generates a small amount of its own heat, and whole wheat has a higher rate of fermentation due to the minerals that provide nutrients for the yeast. Wet dough also ferments more quickly.



Mixing



Dividing



Folding



Preshaping



Resting for three hours

- Alternatively, if your whole grain einkorn has been kept in the refrigerator, you will want to use slightly warmer water.
 - A note on water: reverse osmosis water removes minerals and is typically not ideal for bread, unless it is remineralized.
2. After an hour has passed, gently mix again by hand, checking for any dry clumps. Fold dough in from the outside of the bowl to the inside, rotating the bowl as you go.
 3. Thirty minutes later, fold dough with scraper by picking dough up from the edge of the bowl and folding to the center. Do this four times, turning the bowl a quarter turn each time. Refrigerate, covered with a dishtowel (to absorb excess moisture) then a dinner plate, overnight for 15-20 hours.

Note: The texture of this dough is very loose. Whole grain einkorn absorbs water slowly and refrigerating for an extended period of time will allow it to fully absorb the water and tighten up in texture.

4. The following morning, you will take out your dough. Because this dough is very wet, use water to shape (if flour is used for shaping, the dough will soak up too much flour). Wet your work surface and using your plastic scraper, remove refrigerated dough from your bowl. Keep your bowl of water handy to keep your hands from sticking too much to the dough. Divide in half with your bench knife. Using your bench knife, fold from bottom to top, then left to right and flip over. Rotate the ball of dough, using the bench knife and your hand, pushing in with the bench knife, and using a wet hand to lightly lift and rotate the ball of dough. Place on baking sheet or leave on work surface. Repeat with second half. Cover with a damp towel and allow the dough to rest for three hours. It will relax considerably, but will give the dough a chance to return to room temperature evenly.

Always wipe down your work area, scraping with the bench knife and wiping down with a clean damp towel so no dried bits remain.

5. After three hours have elapsed, prepare your bread pans by first greasing with coconut oil or butter, then dusting with a mixture of 50/50 white rice flour and all-purpose einkorn flour. Wet work surface and remove one round of dough with your plastic scraper. You may have to rotate it into a ball on the baking sheet first to make it easier. Flip the dough so that the top is now upside down on the wet work surface. It's okay if the dough is very loose. This is what we mean by "extensible"! Shape the dough by folding top to bottom, bottom to top and left to right, right to left. Guide the dough with your wet hand and the wet bench knife and work into a round, the last push making it more of an oblong shape. Place in prepared bread pan. I personally prefer glass and stoneware over cast iron for easier release after baking. It's okay if the dough ball folds in on itself when you place it in the pan. You can smooth and push it into the ends of the pan with wet fingers. Repeat with second ball of dough and cover with damp towel.
6. After the three hour final proof, bake at



Placing dough in the pan



Final proofing



Ready for the oven

450°F (non-convection) for 20 minutes, then at 400°F for 30 minutes. You will preheat your oven when your dough has about 45 minutes left to rise. Set your rack in the bottom third of your oven. If you notice that the top of your bread is getting too dark, set a baking sheet on a rack just above your loaves. You can take the temp of your bread to make sure it's fully cooked. 190-200°F is the target temp.

7. Remove bread from pans immediately to prevent the loaves from getting soggy and cool on a wire rack. Because there is so much water in this formula, waiting to cut the bread until it is completely cooled is very important. Cut too early and the bread will have a gummy texture to it. With more time, the grain will reabsorb the moisture and have a wonderful creamy texture. Many bakers recommend waiting 24 hours for this type of bread, but at least 12 hours is my recommendation. ☺☺

Min Kim is a certified traditional foods teacher. Min's love for cooking began in childhood but it wasn't until she learned about Dr. Weston A. Price's research and the GAPS Diet that she began the journey that eventually led her to becoming a Certified Traditional Foods Cook.

Min has become a well-respected baker and gladly teaches others her high hydration, slow fermentation sourdough bread technique. She now teaches both group and private cooking classes, also teaching clients how to prepare bone broths, true fermented sourdough breads, properly soaked grains and legumes, lacto-fermented vegetables, and cultured dairy. She is an inspiring, patient, and empowering teacher. She can be reached at naturallyleavened@gmail.com.

RESOURCES

Bread by Jeffrey Hamelman

The Einkorn Cookbook by Shanna and Tim Mallon

Einkorn by Carla Bartolucci

www.ncbi.nlm.nih.gov/pmc/articles/PMC3664588/

www.tandfonline.com/doi/abs/10.1080/00365520600699983

www.celiac.com/articles/872/1/Baking-Quality-Wheat-Ancestors-May-be-Safe-for-Those-with-Celiac-Disease/Page1.html

INGREDIENTS AND SUPPLIES

- jovialfoods.com for all-purpose einkorn, whole grain einkorn and berries
- tropicaltraditions.com for all-purpose einkorn and berries
- breadtopia.com for bolted, whole grain einkorn and berries
- bluebirdgrainfarms.com for whole grain einkorn and berries
- lentz-spelt.myshopify.com for whole grain einkorn and berries
- pleasanthillgrain.com for bulk einkorn berries

Wise Traditions 2016

Nutrition for All Seasons of Life



November 11–14, 2016 • wisetraditions.org
Renaissance Montgomery Hotel, Montgomery, AL

All Thumbs Book Reviews



***What the Fork Are You Eating?:
An Action Plan for Your Pantry and Plate***
Stephanie Sachs, MS, CNS, CDN
Tarcher Perigee 2014

A clever name defines this book, which is designed as a primer for those who need a very basic tool to navigate the standard American diet. Those savvy in the subject may come across some interesting information in the book but then again, maybe not. Much has been covered at other venues such as the Weston A. Price Foundation, the Price-Pottenger Nutrition Foundation and the Feingold Association.

Section One, “Top Rated Terminators,” covers the dangers of artificial flavorings, colorings and preservatives. Also in this section are short descriptors for sugar, artificial sweeteners, *trans* fats, pesticides, antibiotics, hormones, and GMOs (genetically modified organisms).

Under Section Two, “Pantry Rehab,” Sachs reviews food labeling, which involves spotting the “Top Terminators” from Section One and ridding your pantry and fridge of them. Next we see a chart listing which corporate giants own various organic companies, a topic enlarged upon later in the book.

In Section Three, “Supermarket Strategies,” Sachs explains produce labels, as well as delineating the “Dirty Dozen” and “Clean 15” lists from the Environmental Working Group, which highlight the most and least heavily sprayed produce items. She also provides a shopping guide, tips for buying local and organic, and mentions “pink slime,” BPA (bisphenol A), the “best” energy bars, and a few tips for buying beverages and bottled water.

Section Four, “Meal Rehab,” starts off with the basics of keeping a food diary, a short assessment of dietary habits, and some suggestions for breakfast—including an oatmeal cookie; yogurt with granola; smoothies made with kale; tofu; and pancakes.

After the suggested menus, a section on

kitchen equipment follows, then the recipes shown in the suggested menus. All in all, analysis of the recipes shows a very high-carb, fat-avoiding, high veggie diet. It almost looks like a vegan diet in a little fish wrap.

Next is Appendix A, “Who’s Who in the Big Food World and the Good Guys They Ate”—again, a guide to corporate owners of the organic labels; followed by Appendix B, with a shopping guide and food storage suggestions. These were already discussed in the book. Appendix C covers food storage. Appendix D contains suggestions for a well-stocked pantry: soy milk, rice milk, soy yogurt, lots of seeds and seed butters, fresh and canned vegetables, and brown rice syrup, but no butter, tallow, lard or any animal fats. Appendix E lists some websites on food policy and safety, video references, Smartphone applications, organizations involved in food, etc., followed by acknowledgments, notes and index. That’s it, folks!

Although Sachs seems to champion butter: “I would like you to eat butter, not shortening or margarine,” which sounds promising, the word “butter” appears in the index only once, under “see dairy products.” And it does in fact not appear under “dairy products.” The reference on page 58 encouraging us to eat butter is not listed in the index.

And that’s about the only time we see the word “butter.” The pro-butter sentiment does not come through in the “Recipe Rehab” section in sixty pages of recipes. There is one tablespoon of butter in “Grandma Helen’s Pancakes.” And that’s it. Never another mention.

There are many references to olive oil, which appears in most recipes. This is a Mediterranean Diet plan, and reminds us of all the previous recipe books on the Mediterranean Diet. Thankfully margarine, tub spreads and vegetable oils (other than olive oil) are not allowed. Canola is out. But butter, lard, tallow, schmaltz and other animal fats are absent. We do see a smidgen of coconut oil here and there.

The pro-butter sentiment does not come through in the “Recipe Rehab” section in sixty pages of recipes.

All Thumbs Book Reviews

***Miraculous Abundance:*
One Quarter Acre, Two French Farmers,
and Enough Food to Feed the World
Perrine and Charles Hervé-Gruyer
Chelsea Green Publishing**

Some books engage the mind. Others energize the hands. *Miraculous Abundance* does both, while also nourishing the soul. In an age of more-better-bigger-faster, authors Perrine and Charles Hervé-Gruyer provide a blueprint showing how to get more from less, how smaller and slower achieve better results based on their experiences at the farm they created in Normandy, la Ferme du Bec Hellouin.

The eclectic nature of the farm's growing methods will give everyone from the novice to the experienced grower new and original options to consider. While no section of the book is an exhaustive treatment of any particular topic, each provides enough information for the engaged reader to pursue more on a particular topic if so inspired, and it is hard not to be interested in all topics after finishing each chapter. Permaculture, forest gardening, and bio-intensive gardening dot the book's landscape, inviting readers to consider the immense

Butter and animal fats have a renowned place in the culinary arts, have been championed over and over by the best chefs in the world, and are used because they make food taste good!

The closest we come to "cow" is a recipe for "Cowgirl Chili." No meats, pork, lamb, beef or other animal parts are present. "Cowgirl Chili" is made with chicken!

Throughout the recipe selection, Sachs employs quantities of currently fashionable kale. Tofu and fish feature in a few of the dishes. Curiously, some of the fish is baked without fat of any kind. But a recipe for "kale latkes" is sautéed in grapeseed oil? Oy vey!

The book's cover is attractive, and the print size and font are easy to read. *What the Fork*

possibilities that regenerative agriculture offers: a glorious diversity also seen in the numerous personalities that cross the story's scattered pages.

While the book is inspirational, it is also clear-eyed as to the realities of the tasks at hand. Charles and Perrine do not idealize the challenges and hard work of food production. The authors' own mistakes were many, and are not glossed over. The fact that they survived their first decade of farming while accruing a good bit of debt after excelling in and leaving earlier careers in law and psychotherapy is not ignored or underplayed. As such, for anyone hoping to farm or grow food for a living, the tales told of both successes and failures are an invaluable resource to learn before you leap. So much good counsel is offered in the book in so many areas. Some of it we wish we had better heeded or been aware of before starting our farm!

Scattered throughout are discussions of the economics and energy involved in food production. Here *Miraculous Abundance* provides some startling perspectives. European and U.S. agricultural methods currently consume nine or more calories (usually of fossil fuel) in order to produce and get to people's plates just one

Are You Eating? has received generally good reviews, but I would spend my dollars elsewhere for there is nothing new here that a little Googling won't turn up. Although it's a step in the right direction (for example, avoiding canola and other seed oils), much of this information is found free on websites such as westonaprice.org, feingold.org, ppnf.org—none of which, by the way, are mentioned in the Resources page of the book.

Too much olive oil and not enough butter, whole milk and cream make me a sad girl. This is a version of the puritanical diet, decked out in a green dress. Considering all these points, I cannot recommend the book. My thumb is "down." Review by Sylvia P. Onusic, PhD, CNS, LDN



The book speaks deeply to many modern problems beyond economics, such as the lack of fulfilling work for older people, the dearth of healthy local food sources in many communities, and few opportunities for youth to engage positively with nature.

All Thumbs Book Reviews

calorie of food. This incredible over-dependence on cheap energy makes modern food systems highly fragile and the people who depend on them hang in a precarious and perilous situation. For comparison, studies in China have shown a return of forty calories of food for each single calorie of fossil fuels used (page 141).

The book speaks deeply to many modern problems beyond just economics, such as the lack of fulfilling work for older people, the dearth of healthy local food sources in many communities, and few opportunities for youth to engage positively with nature. An integrated farmstead can provide all of these things for all parties. The book touches on the problems small producers face in terms of a hostile regulatory environment and highly subsidized competition (page 191), pointing out that agricultural change must be accompanied by political and regulatory change. The kind of food future we need is currently hampered by forces working far beyond the local communities. I also greatly appreciate the authors' views on autonomy, decentralization, community interdependence and similar concepts.

I have only two tiny quibbles with this wonderful work. First, I wish the book had more pictures, especially pictures spread throughout the chapters. The sixteen-page photo spread is lovely, but often when knee deep in a particular chapter, I wished that ideas presented or parts of the farm being explored were highlighted in pictures on the same page to allow me to better capture the ideas and beauty of the subject under consideration.

My second quibble regards the authors' rosy comments about the farming practices of the Amish. It appears that the same misunderstandings and faulty assumptions I see among many Americans about the Amish have spread overseas. Sadly, the Amish, while generally eschewing many forms of modern technology, includes members who have adopted some of the worst practices of industrialized agriculture.

I have seen horrid animal care, horrendous soil care, and the use of the most horrific chemicals and modern tools by some Amish farmers. They may not use a phone, but these members of the Amish community will gladly use pesticides, herbicides and a host of other chemical concoctions. One of my Amish neighbors who strives to be truly organic asked our family how we keep junk food away from our kids, especially at community gatherings, where he said most of the food their community eats and shares is highly processed: full of white sugar, white flour and rancid processed fats. To assume that all Amish agricultural practices are by definition beneficial and benign is dangerous. Just as the term "natural" on a food label means almost nothing today, a food identifying itself as a product of Amish farming can offer no blanket assurance of safety or superiority.

Dr. Price directed, "You teach, you teach, you teach." But first one must "learn, learn, learn." *Miraculous Abundance* shows us how the end result of that learning is not only the opportunity to teach others, but the possibility to enrich the health of people and our planet at the same time. Two thumbs up to this wonderful work. May it inspire us all to go big by going small.

Review by John Moody



WE DON'T VACCINATE

We Don't Vaccinate is a sensitive, expressive and discerning documentary. Strictly factual, it stays solely on the vaccine track tackling the contemporary vaccine issue like no other film before it. Out of Germany, the originating homeland of Merck & GlaxoSmithKline, Michael Leitner's documentary, We Don't Vaccinate deserves a widespread worldwide audience so that the mass hypnosis which allows these pharmaceutical companies to continue these crimes can finally come to an end.

\$3.00 to rent, \$8.00 to download, vimeo.com/ondemand/wdv

All Thumbs Book Reviews

***Psychiatry Under the Influence:
Institutional Corruption, Social Injury,
and Prescriptions for Reform***
Robert Whitaker and Linda Cosgrove
Palgrave Macmillan 2015

Psychiatry Under the Influence is the third in a series of books by Robert Whitaker about mental illness and the drugs and methods used to treat its various forms in America. In his earlier works, *Mad in America* and *Anatomy of an Epidemic* (both previously reviewed in these pages), Whitaker unmask a subject usually depicted in horror movies, and exposes the shameful side of the psychiatry profession. This is a profession in league with the pharmaceutical industry, which has disabused the mentally ill of their personhood in the last century. Can you imagine hacking into a person's brain with an ice pick in the name of psychiatry? Electroshock, lobotomies, torture-like water treatments and mind-numbing drugs are not just the stuff of movies but stark realities for the mentally ill. In *Psychiatry Under the Influence*, Whitaker and Cosgrove strip off the white coat and expose the shame, greed and scandal of a profession that has become the handmaiden and enabler of a multi-million dollar drug industry. Why do physicians who pledge to do no harm actually buy into the malarkey? It's a well-laid out, complex and perfectly executed plan where fame, power and money can turn a doctor's head. Some are persuaded to deceive. In several studies that polled doctors and asked them about accepting benefits, doctors had convinced themselves that most of these practices were acceptable, but worried that the benefits might influence the prescription habits of their fellow physicians.

But because of psychiatry's group consensus and approval, society has condoned and even paid for the treatment of the mentally ill, first as monsters in chains, then as prisoners locked up in mental institutions and group homes, or even as foster children maintained and tamed on

mind-destroying drugs. We accept the premise that psychiatrists are experts, know best and will cure us of our demons. This is far from the truth, say the authors, who describe the deception that is rampant in bringing drugs to market. It is not enough that the drugs are approved. There must be a demand created for their use.

In this book, the authors peel the onion, layer by layer, dissecting and documenting how psychiatry and the drug companies built a powerful industry funded by public tax dollars, the federal government and other bodies, and advanced the agenda that every man, woman and child could be mentally ill or psychiatrically imperfect in some way—and hence in need of a psychotropic drug.

Perhaps one of the saddest stories surrounds the period in the 1990s when antidepressants were brought to market. The target soon became children, adolescents and young adults. Studies soon showed that these pills were dangerous and that kids taking antidepressants were killing themselves. The warning was real but swept under the rug. Kids of this age put on antidepressants are at a high risk for suicide. Please, if you are a parent, grandparent, patient, or health care professional, do your homework: read this book and others like it, and search pubmed.org (of the National Library of Medicine), a user-friendly investigative tool, and other places for answers.

The psychiatric profession and drug companies are partners in an easy camaraderie under which they developed a model allowing each drug they bring to market to climb to the top of the charts as the drug of choice for that condition. Even though there may be a drug which was formerly deemed the best, another drug company will bring a similar one to market and this drug makes the ascent to the top of the ladder. Each has its time in the sun and share of the earnings pie.

But psychiatry was not always so profitable. Before the blockbuster psychiatric drugs came on the market and psychiatrists had few tools,



Whitaker and Cosgrove strip off the white coat and expose the shame, greed, and scandal of a profession which has become handmaiden and enabler of a multi-million dollar drug industry.

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they were relegated to working in mental asylums where they received no respect. After the asylums started to close, a change was needed to advance the field. To achieve this goal, psychiatry looked to the other medical specialties, their disease model, and the related book of diagnostic codes, *The International Classification of Diseases*, now in its tenth revision. The ICD-10 defines all medical conditions and prescribes a medication or treatment for each. That code is submitted to insurance companies to pay for the treatment, and gives the medical profession a strong semblance of legitimacy, order and authority. No code, no payment. Psychiatrists took notice and said, in effect, “We want that, too.”

The American Psychiatric Association (APA), the grounding organization for psychiatry, took the profession in hand in the 1980s, adopted the medical model, and gave it a new look and new direction. Up to that time psychiatry was suffering an identity problem, not only from the asylum days, but because of their Freudian bent in diagnosis, which was losing popularity. Insurance companies were complaining. There was no detailed guide to psychiatry.

The APA started by rewriting the basic foundational document of the profession, *The Diagnostic and Statistical Manual of Mental Disorders* (DSM), which defines all the diagnoses of mentally ill patients. The DSM-3 described two hundred sixty-five psychiatric disorders, vastly increased from the few disorders reported in prior volumes. Presenting all these disorders as discrete illnesses gave the psychiatrist legitimacy as a medical specialist, and the field plenty of room for new drug development. The DSM-3 expanded the market, and gave greater rationale for treating children with a range of drugs. Few of life's problems escaped coverage under some rubric of mental disease.

However, things were not perfect in paradise. In the field, the DSM-3 tested poorly on reliability and was not any better than DSM-1 or DSM-2. There was no evidence of reliability in follow-up studies. Most of the two hundred sixty-five disorders required validation because they were based on clinical judgments. But that didn't matter, and ultimately nothing was done. Psychiatry marches on.

The development of this manual laid the fertile ground for the corruption that followed. With the development of each succeeding DSM, the task forces pushed the envelope a bit further. For DMS-4 and now DSM-5 the majority of the authors have strong ties to industry. Everyone had an agenda. Diagnostic boundaries were expanded so that more people could be included under the banner. For example, premenstrual dysphoric disorder became a full-fledged disorder with its own criteria and drug prescription.

The DSM-5 in 2013, was surrounded in controversy. After it was released even the most vocal in the field and former task members on prior DSMs called the manual “dangerous,” and many offered harsh criticism of DSM-5. Dr. Allen Francis, a former chairman of DSM-4,

said about DSM-5: “This is the saddest moment in my forty-five-year career of studying, practicing and teaching psychiatry. The Board of Trustees of the American Psychiatric Association has given its final approval to a deeply flawed DSM-5 containing many changes that seem clearly unsafe and scientifically unsound. . . Our patients deserve better, society deserves better and the mental health professions deserve better.”

The ever-broadening diagnoses leave wide open the possibility for drug development. Before drugs are brought to market they undergo clinical trials, in which psychiatrists lead the drug testing. These researchers receive generous grants from the government or drug companies to conduct the trials. Psychiatrists publish the trial results in medical journals. Often they don't have to write the articles, and merely lend their names to articles ghost written by anonymous authors of the drug company's choosing. After publication, prominent psychiatrists hold news conferences, and appear on the covers of *Time* and *Newsweek* extolling merits of the drug. Others conduct continuing education programs about the specific drug and give lectures at APA and other conferences. Drug reps provide free samples to physicians. Drug advertising floods the airwaves. And voilà, the drug's supposed efficacy becomes fact.

This is the typical path of each drug to market and the model appears effective in guiding the drug's way onto the practitioner's prescription pad. The doctor on the front lines doesn't really know the side effects and/or efficacy of the drug because those leading the drug trials find ways to bend or cherry pick data, indulge in doublespeak, and creatively misreport so that the results will fit the desired outcome. Results in drug trials can be covered up or disguised through study design, statistics and selective reporting. In many cases, the drug under study is no different from the prior drug *du jour*, which was found to be ineffective after all. Whitaker and Cosgrove show us in case after case where

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this pattern was effective in getting drugs approved.

A busy practitioner does not have time to study medical journals. And if a doctor observes that the drug is not helping, he may change the drug, think the patient is an outlier (one of those for whom it does not work), or that the patient is not complying with instructions. It would be hard for a doctor to believe that he was deliberately misled about the efficacy of the drug.

But the inane methods of the mad men who are psychiatrists do not cease. The wounded warriors who have experienced post-traumatic stress disorder in large numbers in the Middle East are being electroshocked as the treatment of choice. Even pregnant women receive electroshock and antidepressants. Babies are born with antidepressants running through their veins. These antidepressants are approved for breastfeeding moms and for their newborns

getting mother's milk. Children no older than two are given speed, such as Ritalin, as well as antidepressant cocktails. But it's all okay, say the psychiatrists and those who fund them, even though studies have shown time and again that these methods do not help but decidedly do harm.

Mr. Whitaker shows how undergoing psychiatric treatment is not something to be taken lightly. Serious side effects can occur. Drugs can permanently change the brain chemistry and cause things like "extrapyramidal movement disorders" and "tardive dyskinesia." Often physicians who dispense drugs have not received proper training and do not recognize the many different manifestations of these disorders. It is especially troublesome because "these conditions can be particularly difficult to recognize in children, even for those with specific training." The longer they go unrecognized, the greater likelihood they will become permanent.

Psychiatry Under the Influence is a serious read, empowering and frightening at the same time. For those who would like a challenge, I heartily recommend this book and give it a strong thumbs up.

Review by Sylvia P. Onusic, PhD, CNS, LDN

THE BIG BOOK OF KOMBUCHA by Hannah Crum and Alex La Gory

Oh, kombucha! How do we love thee? Let us count the ways! This is exactly what Hannah Crum and Alex La Gory do in their big, beautiful book about kombucha. Kombucha—sweetened tea fermented with a SCOBY, a symbiotic combination of bacteria and yeasts—is a world-wide phenomenon, one that is certainly giving fits to the soda industry. Crum and La Gory provide the fascinating history, the extensive science, the lore and the lingo—one word for kombucha in German is *Gichtqualle*, meaning "gout mushroom."

We get detailed instruction on kombucha making—including information on types of tea, sweeteners, water, method and equipment to use. Then comes a most inspiring chapter on flavored kombucha—with fruit, herbs, vegetables, even bacon!

After that, the recipes, starting with beverages like kombucha smoothies, ice cream floats and cocktails. Ketchup, mayonnaise, salad dressings and marinades can all be made with kombucha. Kombucha makes a great starter for ferments, and a soak for marinated fish. The SCOBY itself can be dried into a kind of jerky, and sweetened to make a candy, jello or fruit leather.

More uses for kombucha: laundry booster, stain remover, acne remedy, face mask, skin cream, bath soak, hair tonic, sunburn relief and even a flea and tick repellent. Adding old SCOBYs to the compost pile will speed decomposition, and your pigs will love them!

So there are lots of ways to love kombucha, and let's not forget all the ways to love Hannah and Alex, owners of Kombucha Kamp (kombuchakamp.com), generous sponsor and donor at our conferences, and founders of Kombucha Brewers International, a trade association to support commercial kombucha brewers. Today there are about one hundred fifty commercial kombucha makers in the U.S., and this is only the beginning. Let's look forward to the day when every hamlet, town and city has its own distinctive brand of kombucha, sold in supermarkets and mom-and-pop stores, featured on restaurant menus, purchased from vending machines, served at barbecues, dinner parties and weddings, and providing inspiration to kombucha snobs and aficionados. Hannah and Alex have played a major role in the kombucha revolution and will continue to do so with this inspiring and exquisitely illustrated book. Big THUMBS UP!

Review by Sally Fallon Morell

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***Fields of Farmers:
Interning, Mentoring, Partnering,
Germinating***
By Joel Salatin
Polyface Farms, Inc.

All of us admire Joel Salatin for his pioneering work in pasture-based, multi-species agriculture. As a prophet of regenerative farming and author of many practical how-to books, Salatin has inspired thousands of farmers, investors and consumers. All over the country, indeed throughout the world, new land stewards are getting up in the morning to pull chicken tractors, collect eggs from eggmobiles, check piggerators and move cows to new pasture. These activities create beautiful farms, build topsoil, heal the land and provide an abundance of healthy food. This is the model for the future, and no one has done more to create and refine that model than Salatin.

Less well recognized is Salatin's innovative work in training interns and apprentices—creating not just fields of grazing chickens and cows, but fields of farmers. Lest you think that Salatin has merely figured out a way to get cheap labor, this book will set the record straight. Salatin's intern program is the result of much careful thinking, hard work, time commitment and patient teaching skills. It's harder to get into Salatin's intern program than it is to gain acceptance to Harvard University—and the interns probably learn a lot more. Not only that, they receive a stipend instead of taking on crushing student debt.

As Salatin points out, internships exist in

nearly all fields and all over the world; they allow a person real-life access to an intended vocation without the full responsibilities of actual employment. By the same token, internships allow employers (in this case farmers) to observe the working habits, common sense and creativity of many bright-eyed young people, with an eye to future permanent employees, managers—even spouses for their sons and daughters! Internships do not exploit but help transfer “information embedded in our agrarian subculture to our best and brightest young people.”

Running an internship program is a huge commitment—Salatin's farm Polyface was in business for thirty years before it began having interns. The work begins in the fall as the Salatin family sits around the kitchen table mulling over some two hundred applicants for eight places. After winnowing down the list, the Salatins invite about forty candidates to Polyface for a two-day working “interview” of “gut-wrenching, sweaty, hard work” and family interaction. Then comes the difficult final selection process. When the accepted interns show up on June 1, they go through a careful training program. The Salatins provide a list of detailed rules and expectations—from filling chicken feeders to the right height to changing bed linens at least once a month.

Even with this careful selection process, things do not always go smoothly—lost tools, escaped cows, wrecked equipment, personality conflicts and resentments can make the farmer's life difficult. Anyone who has taken on interns often asks himself or herself whether such a

It's harder
to get into
Salatin's
intern
program than
it is to gain
acceptance
to Harvard
University.

THE ADVENTURES OF ANDREW PRICE
By Sandrine Love and Mohammed Naser

Here at WAPF we aim to make the findings of Dr. Weston Price understandable to all ages. No one has done more to spread the word to young families and their children than Sandrine Love with her Nourishing Our Children project. Now Love and partner Naser enlarge their scope with this attractive book for children. *The Adventures of Andrew Price* describes Weston Price's visits to Switzerland, Alaska and Africa with words and illustrations that children will love. This is a limited edition book so don't delay in obtaining a copy for your children and grandchildren. The book is available at adventuresofandrewprice.com. Thumbs UP.

Review by Sally Fallon Morell

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The LDN Book

**edited by Linda Elsegood
Chelsea Green Publishing**

The introduction gives a very telling glimpse into the world of medical practice. Dr. Cottel of California found that several years into her practice, her days were filled with insurance paperwork, phone calls, chart reviews and unfinished progress notes. She spent more time at a computer than with patients. That would have been acceptable if she felt she was helping people, but she wasn't. Her schedule was filled with patients suffering from various chronic diseases who never got better. Our drug-based approach to healthcare has hit a wall.

Everything changed when she discovered low dose Naltrexone (LDN). What is that? Well, it's a drug. She found out about it from one of those dreaded patients who come into the office carrying something they printed off the internet. She did her best to ignore it but it came up a few years later when another patient talked her into trying it with him. After two years of treatment, his preliminary symptoms of MS completely disappeared. After treating over one hundred patients she is convinced that she is seeing results way beyond a placebo effect.

Each chapter of the book (with one exception) is written by a different author. The first chapter covers the history of LDN. The second chapter talks about multiple sclerosis (MS) and lupus, which LDN seems to improve most. I've

known several people suffering from MS, and there seems to be a wide range of severity. The preface of this book gives a very good firsthand account of what it is like to be incapacitated by the disease. Fortunately in this case, the victim was able to resume her life after treatment with LDN.

Other conditions discussed in other chapters are inflammatory bowel disease, chronic fatigue syndrome, fibromyalgia, thyroid disorders, restless legs syndrome, depression, autism and cancer. Fifty million Americans suffer from some form of autoimmune disease. At least one of the authors explains the theory of how LDN boosts immune system effectiveness. Environmental toxicity, gut bacteria balance, epigenetics and diet are also mentioned by various authors, although I don't recommend this book for dietary advice.

More insight into the medical system comes from another doctor later in the book. Insurance companies only reimburse for visits that are ten or twenty minutes long, so doctors who spend any more time than that with the average patient will go broke sooner or later. Even on television, the heroes usually get one hour minus commercial time or about forty-five minutes to solve the latest world crisis. That same doctor refers to some interesting studies on diet and exercise. Those studies say that anything more than moderate exercise counteracts many positive effects including weight loss. After several rounds of dieting, weight loss occurs at half the rate and weight gain triples. That might explain why airplanes need bigger seats.

This book is very clear that LDN doesn't work for everybody. An FAQ section in the back includes important details like common side-effects. The most common is sleep disturbance which almost always was temporary. That has only occurred in eight percent of patients. I suspect any long-term effects will be discovered by the usual guinea pigs—the general public, but as drugs go, this one seems fairly benign. I personally still consider drugs a very last resort when nothing else works, and the situation is dire. For people in that situation, this might be something to consider. My thumb is UP.

Review by Tim Boyd

program is worth it. Wouldn't it be less hassle just to do the work oneself?

But dedication to an intern program creates farmers for the future—something we clearly need when the average age of farmers today is almost fifty-six. "Folks just really weren't getting into farming that much," says Bob Young, chief economist with the American Farm Bureau Federation. But thanks to Salatin, they are today.

Perhaps the most inspiring parts of *Fields*

of Farmers are Salatin's stories of how his former interns have acquired farms and become professional farmers, often through leases—farm land is dirt cheap to rent these days—but sometimes as a result of a retiring farmer's largesse. Many farmers contact Salatin wanting to keep their land in farming but whose children have no interest—and no training—for returning to the land. Thanks to his intern program, Salatin is always able to suggest a likely candidate, a candidate who often ends up inheriting the farm. We need many more intern programs and *Fields of Farmers* is a great source for farmers following in his footsteps.

Review by Sally Fallon Morell

All Thumbs Book Reviews



One Straw Revolutionary: The Philosophy and Work of Masanobu Fukuoka
by Larry Korn
Chelsea Green

There are many approaches to farming—organic, biodynamic, permaculture, hydroponic, aquaponic, chemical factory farming, GMO, monocropping, and so forth. Masanobu Fukuoka calls his method “natural farming.” His approach doesn't just apply to growing food but to an entire way of life. Modern agriculture seeks to maximize production whether it really needs to or not. Collateral damage to the soil, water and environment are someone else's problem. Efficiency is the top priority.

One of the more memorable moments in the education of author Larry Korn was when a professor explained that plowing up a field does enormous damage to the quality and fertility of the soil. He asked the professor why we farm that way if it is so destructive. The answer: because we don't know any other way.

Natural farming does not plow, does not use chemicals, does not damage the environment and may not be the most efficient way to farm, but Mr. Fukuoka's farm out-produced neighboring conventional, more “efficient” farms in southern Japan. By using cover crops like white clover and planting different crops in certain sequences, he avoided a lot of the work required by conventional methods. He also used animals to do a lot of work for him, like ducks to eat snails in the rice paddies.

Rice is typically planted in starter beds, then transplanted, weeded, fertilized and basically swamped with water. Natural farming produces rice without doing any of that, and the yield is competitive with conventional practices.

There are no nice neat rows of crops with natural farming and that means you can't efficiently ride your harvesting machine with comfortable, climate-controlled cockpit through the crops and let the machine do the work. You're

back to manual labor. Fukuoka doesn't see working in the field as a curse or drudgery. He sees it as fulfillment. Our disconnection with nature has led to environmental destruction, chronic illness, social unrest, boredom, dissatisfaction and depression.

Mr. Fukuoka had little use for modern science that studies the world in a very fragmented way and learns nothing useful as a result. Studying a barley plant in a sterile, isolated environment tells you nothing about how that plant interacts with the real world in a natural setting. Studying vitamin A in isolation is equally uninformative. You learn nothing about how it interacts with other nutrients and affects complex human biology.

During his later years, this natural farmer traveled around the world to places like California and India. One of the things that impressed him about California was how human abuse was turning it into a desert. In India he met a farmer who was doing a better job than he. When he visited New York City and Harlem in particular he made a very interesting observation. He said, “. . . it was the African Americans who were able to laugh from the heart. . . but when I looked at the faces of the [supposedly] smart and clever, those living affluent lives, none of them bore an expression of contentment. All had a tragic, cornered look on their faces.”

He had a common-sense economic point of view that appeals to me. He did not buy into the typical American view that the economy must continue to grow or we are doomed. That may be true of the current Ponzi economy but there are other, better ways to run an economy. Satisfaction is impossible with the “grow or die” outlook. On a finite planet with finite resources, that doesn't make much sense. Why can't we live with a more steady, sustainable economy? This book makes you think and I think my thumb is UP.

Review by Tim Boyd

Studying a barley plant in a sterile, isolated environment tells you nothing about how that plant interacts with the real world in a natural setting.

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50 Human Studies

In Utero, Conducted in Modern China Indicate Extreme Risk for Prenatal Ultrasound:

A New Bibliography

By Jim West

Western medical authorities insist that diagnostic ultrasound (DUS), used to observe the fetus in pregnant women, is harmless, with no known risks. But some urge caution. According to Dr. Robert Mendelsohn, author of *How to Raise a Healthy Child in Spite of Your Doctor*, “Ultrasound is the latest example of an unproven technology being sold to the public as being ‘perfectly safe.’ It falls in the same class as painting radium on watches, fluoroscopying children’s feet in shoe stores, routine mammography, routine chest X-rays, radiation therapy for tonsils, exposing army personnel to atomic bomb tests—in each case, the medical profession failed to take the necessary steps to protect people against a malignant technology whose risks were already known.”

In this book, researcher Jim West presents a new ultrasound bibliography, the Chinese Human Studies (CHS), conducted in China to investigate damage to the human fetus by DUS. The Chinese exposed women who had elected to undergo abortion to DUS and then studied the abortive matter. The findings: alteration and injuries in the organs, tissues, cellular ultrastructures; damage to the cytokine signaling in molecules, red blood cells, neurons and mitochondria.

Damage is proportional to duration and intensity of the machine—very worrisome since the FDA allowed an eight-fold increase in intensity in 1991, so doctors “could get a better picture.” Fetal monitors—used today instead of stethoscopes to listen to a baby’s heart—employ the same technology.

This is madness! Doctors have forgotten the dictate, “First, do no harm.” And since the medical profession is insouciant, moms will need to protect themselves. “Just say no” to diagnostic ultrasound and fetal monitors.



Review by Sally Fallon Morell 

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 are peddling misinformation, and for these we will give a negative review. We also will give a negative review to a book that misrepresents the findings of Weston A. Price.
- Please do not send us a book as an email attachment. Have the courtesy to send us a hard copy book or a print-out of your ebook or manuscript in a coil binding.

Tim's DVD Reviews

Bright Spot

**Produced by Rob Tyler and Tamer Soliman
Sympactful Wellness Media
(available from Vimeo)**

The indigenous people of the Cayman Islands had a great appreciation for the tree of life, which is what they call the coconut palm. It provided one of the most important foods in their traditional diet. Coconut oil in particular provides great health benefits. When consumed it is not stored as fat but burned as energy. It provides medium-chain fats that are important for the brain and are hard to find in other food sources.

Tragically, through the magic of modern industry, most coconuts in the Cayman Islands end up in the trash. Western factory food pushers launched a smear campaign claiming coconut oil will kill you and aggressively marketed processed cooking oils, margarine, and other junk made from genetically modified crops soaked in pesticides. That is what is currently being promoted as healthy food in a world where up is down and left is right. Cayman residents now suffer from the same chronic illnesses as the rest of us: diabetes, cancer, heart disease, and so on.

This video was produced by subversive forces who are working to give the islands an oil change. Their goal is to rescue the coconut from the trash and restore it to the food supply where it belongs. The result would be improved health for the people and improved health for the local economy. They could even export it to the rest of the world and improve everybody's health. The thumb is UP for that.

Evidence of Harm

**A Randall Moore Film
DoNoHarm, LLC**

The three main sources of mercury from human activity are power plants, mining and

dentistry. Industry has recognized the fact that mercury is a problem in power plants and mining and has taken steps to protect public health. Some dentists also understand the dangers, but many others are slow to get it, perhaps because they are exposed to so much of it. Mercury in dentistry is the subject in this video. Many dentists now no longer use mercury-containing amalgams but still must remove amalgams to replace with composites. Tests have shown that even those dentists with their extensive safety protocols have much higher levels of exposure compared to the general public.

This video follows the stories of three people involved in mercury amalgam toxicity. Stacy Case and Karen Burns were victims suffering illness from mercury exposure, and Boyd Haley, retired professor of chemistry at the University of Kentucky, has been researching mercury exposure for many years.

Stacy Case is a reporter and young mother in Tennessee who was diagnosed with multiple sclerosis after having four amalgams replaced. Karen Burns worked in a dental office for many years until her symptoms were too severe to continue working full time in that high-mercury environment. Both women experienced great improvement after heavy metal detoxification. Stacy in particular felt much better one week after starting detox therapy.

Professor Haley did research for many years and never had trouble getting funding for that research until he started trying to get money for researching mercury in amalgams. The money immediately stopped. If you look him up on the internet you can find a lot of nasty things being said about him. He must be on to something. Like they say, the flak is worst when you are over the target.

According to Haley, the science is very clear. After many years of studying things like the damage to neurons seen in Alzheimer's patients, only one thing causes that kind of damage. That one thing is mercury. As he said,

Their goal is to rescue the coconut from the trash and restore it to the food supply where it belongs.

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the science is not the problem. Even the United Nations has tried to mandate that mercury be removed from amalgams by 2013. The politics are the problem.

In the film, the FDA is scrutinized; their action on mercury in vaccines is suspicious, to say the least. Their ruling that amalgam is safe contained at least twenty-seven errors. Margaret Hamburg, a former commissioner of the FDA, had and has significant financial ties with the company Henry Schein, one of the biggest makers of amalgam. After the release of FDA's questionable ruling Henry Schein was very grateful for Hamburg's help in preserving a major part of their business. The FDA did come up with some restrictions on the use of amalgam. They did this very quietly—so quietly that almost no one knows about them. One of those restrictions states that amalgam should not be used with anyone who is allergic to mercury. I think that would include about 7.293 billion people on this planet. I don't know about any other planet even though some people seem to think I'm from another ... Anyway, if you are not one of the 7.293 billion people allergic to mercury then amalgams may be just the thing for you. The thumb is UP.

Diagnosing and Treating Vitamin B₁₂ Deficiency

Vitamin B₁₂ deficiency can look like many things—multiple sclerosis, Parkinson's, Alzheimer's, autism and others. It often goes undiagnosed. Often it is identified only after a long string of misdiagnoses. According to the Framingham Offspring study, about forty percent of Americans may have suboptimal levels of vitamin B₁₂. It is needed in only small amounts compared to other vitamins which might lead some to think it is not very important. B₁₂ is necessary for the health of all DNA and insufficient levels cause neurological problems, such as a tendency to irrational anger. So yes, it

is kind of important.

This vitamin is hard to digest and several things make it even harder. Nitrous oxide neutralizes B₁₂. Common medications that block B₁₂ include metformin (diabetes drug), acid suppressants, oral birth control pills, chemotherapy drugs and statin (cholesterol) drugs. High folic acid increases the need for B₁₂.

Vitamin B₁₂ deficiency is widespread because most people, including doctors, don't know about it. If left to progress too far, there is no known way to reverse the damage. Raised awareness would save a lot of people a lot of grief and this video does that so my thumb is UP. The video is available at youtube.com/watch?feature=player_embedded&v=BvEizypoyO0.

In the Interest of National Security

R. James Roberson

Kaul, Roberson and Associates, LLC

There are many great quotes in this movie like the one from Voltaire, "It is dangerous to be right when the government is wrong." So you know what I mean when I say it is dangerous to be right in the United States. One of the many ways the U.S. government is wrong is in how it goes about regulating the economy and, more specifically, how it regulates food production. All great empires in history have fallen primarily because they failed at food production. Here in the twenty-first century we have a front row seat to the collapse of the American empire.

An American example of the importance of food to the security of a nation occurred in the nineteenth century when the U.S. military went up against the Plains Indians. The U.S. military was stopped cold and manifest destiny had to wait until the buffalo, the food supply of the native Americans, was wiped out. In public schools we are led to believe we were able to prevail over the native Americans because of superior weapons. Not really. Muskets were

According to the Framingham Offspring study, about forty percent of Americans may have suboptimal levels of vitamin B₁₂.

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inaccurate, unreliable and took forever to reload. The bow and arrow was the more efficient weapon, much faster to reload and just as deadly. But when your food is gone, weapons don't matter anymore. As the title of the movie suggests, secure production of high quality food is critical to national security.

Another great point about basic economics comes from Jean Baptiste Say. Products pay for other products. Money is just the conduit. Creation of more money just creates more inflation and ultimately less consumption and less production. Abundance of products is more important to an economy than abundance of money. Government economic policy over the last century has been more concerned about money than production. In many cases, farmers have been paid not to produce.

This video is loaded with fascinating historical film clips documenting government regulation of farming and food production. One is struck by the insanity of policies that set prices below the cost of production, then fixed that by subsidies. As we have seen in practice, those subsidies go to the food industry that produces the lowest quality plastic swill.

This video is a bit long, over two hours, and doesn't provide any clear solutions or suggestions. It does contain a lot of detailed information that will interest the student of history. While the mainstream wrings its hands over global warming and gun control, the much bigger crisis is revealed by the average age of American farmers. Because government policy has made it impossible to do well on the farm, many have dropped out of farming—young people are not up for impossible careers. The average age of the American farmer is approaching sixty. Now that's a crisis. The thumb is UP for this video.

The Truth About Cancer: A Global Quest Episode 1, The True History of Chemotherapy and the Pharmaceutical Monopoly


Ty Bollinger

One hundred years ago there were several choices for health care. There was homeopathic, chiropractic, herbalist or the relatively new pharmaceutical-based medicine. Suppose you are rich, evil and have a lot invested in the pharmaceutical medical approach. You want to eliminate the competition and monopolize drug-based medicine. You want to be sneaky. How do you do it?

The answer, if you have a lot of money like Rockefeller and Carnegie, is to establish charitable foundations that give away lots of money for medical programs, education and research. Sounds great to those who don't pay attention to the details. They are generously giving away piles of money to help people. How wonderful! Unfortunately, all that money is only going to the drug-based system. Then you establish a very official-sounding certification system which only certifies practitioners and facilities that you approve of. Your education system carefully identifies as a quack anyone you don't certify.

That is what Rockefeller and Carnegie did, and they did it well. Such schemers can throw studies into the above mix where they pay for results that favor drugs and discredit the competition. Because they have a lot of money they can flood the literature with their propaganda studies, then fool the weak-minded by constantly saying the majority of studies show blah, blah, and blah. If anyone tries to spill the beans, they are labeled conspiracy theorists and everyone knows there are no conspiracies.

With people like this running the system nothing should come as a surprise. As a result of barbaric research done in the 1940s, it was found that mustard gas lowers lymphocytes, which could be useful for certain kinds of cancer. This led to chemotherapy, which may reduce tumors but also kills other cells you really need to stay healthy. Early theories said all cells can become cancerous but more recent research indicates only cancer stem cells produce cancer. Recent research also suggests that chemotherapy may kill tumor cells but does not kill cancer stem cells. In fact, it makes them more aggressive. That and many other side effects make chemotherapy a bonanza from a money-making point of view.

Even if you don't believe the latest research on chemo, surveys have revealed that 90 percent of oncologists would not prescribe chemo to a close family member and would not take it themselves. They must know something they don't want to tell the rest of us. This video was the first episode of a series available online. I have not seen the other episodes but this one definitely rates a thumbs UP. Available at <https://go2.thetruthaboutcancer.com/global-quest/episode-1/> 

Legislative Updates

NEW REGULATIONS ON PRODUCE GROWERS

By Judith McGeary, Esq.

At the end of last year, the FDA released the third major final rule under the Food Safety Modernization Act (FSMA): the Produce Safety Rule.

This rule governs how farmers raise and harvest fruits, vegetables, nuts, mushrooms and sprouts. It covers an incredibly wide range of issues, including building and equipment standards, employee training, water quality and testing, wildlife contact, grazing and working animals, and more. While the rule does not include any fees, the FDA estimates that it could cost twenty-five thousand dollars annually for a small to mid-size farm to comply—a crippling sum for many farmers.

So the first and most important question is: does this rule apply to you? The rule applies to businesses that grow, harvest, pack or hold produce. If your only products are meat or value-added, then the rule doesn't apply to you.

For produce farmers, the rule contains three blanket exemptions:

1. Produce grown for personal consumption;
2. Farms that sell less than twenty-five thousand dollars of produce annually (adjusted for inflation);
3. Farms that only raise produce that FDA determined is “rarely consumed raw.”

For the last exemption, FDA has created an exhaustive list: asparagus; black beans, great northern beans, kidney beans, lima beans, navy beans, and pinto beans; garden beets (roots and tops) and sugar beets; cashews; sour cherries; chickpeas; cocoa beans; coffee beans; collards; sweet corn; cranberries; dates; dill (seeds and weed); eggplant; figs; horseradish; hazelnuts; lentils; okra; peanuts; pecans; peppermint; potatoes; pumpkins; winter squash; sweet potatoes;

and water chestnuts. Some of the items on this list are puzzling, but the issue isn't whether or not you agree that these foods are rarely consumed raw; under the regulation, if you grow only these crops, you are exempt.

If you grow, harvest, pack, or hold produce, and do not fit into one of those three exemptions, then you are subject to at least some portion of the Produce Safety Rule.

Produce that is going to be processed with a kill step (such as in canning) is subject to the record keeping and some other portions of the rule, but not subject to the more costly requirements on how it is grown and harvested.

The largest exemption comes from the Tester-Hagan provision, which WAPF and other organizations fought to include when Congress passed FSMA. Farmers who sell less than five hundred thousand dollars worth annually of all food (adjusted for inflation) and who sell more than half directly to “qualified end users” are exempt from most of the requirements. “Qualified end users” include both individual consumers wherever they are located and restaurants or retailers that are either within the same state or the same Indian reservation as the farm or within two hundred seventy-five miles of the farm. The retailers and restaurants must in turn sell directly to the consumer, so that the farmer is not more than one step removed from the final consumer for the majority of the farm's sales.

Farmers who are exempt under the Tester-Hagan provision must:

1. Keep records to prove that they qualify and
2. Label their food or have a sign at the point of sale with the name and full physical address of the farm.

If the farm is connected to a foodborne

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illness outbreak, or the FDA determines that there are conditions at the farm that threaten human health, the agency can revoke the exemption on a case-by-case basis.

If not exempted, produce farmers will have between two and four years to come into compliance with the substantive provisions of the regulations, depending on their size. There remains significant ambiguity about how many of the provisions apply to real-world situations, and the FDA has stated that it plans to issue guidance documents.

This article does not constitute legal advice. Please consult an attorney if you have questions about the regulations that apply to your farm.

RAW CHEESE UPDATE

Last year, FDA added a new dimension to its attacks on raw cheese by calling for comments on the topic of “potential intervention measures to reduce the risk of foodborne illness” from raw milk cheeses. The underlying premise was that more regulations are needed—despite statistics showing that aged raw milk cheeses are the source of remarkably few illnesses. WAPF responded with in-depth comments on the current safety measures that are already in place and the science supporting the safety of aged raw cheeses. WAPF’s comments to FDA are available at westonaprice.org/press/raw-milk-cheese-as-safe-as-pasteurized/.

While FDA has made no public announcements since the comment period closed, the American Cheese Society (ACS) recently announced that it met with the FDA in mid-February to discuss the issue of raw cheese regulation. Seven cheesemakers, ranging in size from a producer who makes twenty pounds of cheese per week to producers who make more than twenty thousand pounds of cheese per week, spoke with FDA personnel about their operations. ACS has not released the text of their testimony.

ACS has stated that the next step is to “gather industry stakeholders, scientists, technical experts, and FDA regulators to discuss the effectiveness of current regulations, and to determine what preventive controls, based on scientific data and FSMA compliance requirements, truly make sense for the cheesemaking community.” ACS has a somewhat worrisome history of highlighting its close relationship with FDA while not standing up for producers under attack by FDA, so it bears close watching as to who is included in these meetings.

In 2006, there were six artisan cheesemakers in the U.S. while today there are over two thousand, many of whom produce raw cheese.

GMO LABELING FIGHT HEATS UP


Last summer, the U.S. House of Representatives passed a bill, nicknamed the Deny Americans the Right to Know (DARK) Act, that would overturn all state laws on the labeling of GMOs and permanently enshrine the failed federal policy of “voluntary” labeling.

Although the grassroots opposition successfully stalled the bill for several months, the DARK Act is now rearing its ugly head in the U.S. Senate. On March 1, Senator Pat Roberts (R-KS) pushed the Senate version, S.2169, through the Senate Agriculture Committee by a vote of fourteen to six. Three Democrats—Senators Joe Donnelly (IN), Heidi

Heitkamp (ND) and Amy Klobuchar (MN)—joined all the committee Republicans in advancing Roberts’ legislation.

In response, Senators Jeff Merkley (D-OR), Patrick Leahy (D-VT), Jon Tester (D-MT), and Bernie Sanders (I-VT), have filed a competing bill which would also pre-empt state laws—but by establishing a mandatory federal labeling requirement. Under Merkley’s bill, food companies would either have to include the words “genetically engineered” next to each GMO ingredient or in a notation at the bottom of the ingredient list, or use a symbol that would be established by the FDA (such as a “T” for transgenic in a triangle, as Brazil does). The last option is obviously the least useful and poses concern for those who have been fighting for transparency in our food system. Even so, the Merkley bill would at least provide for mandatory, on-package labels, which is more than we have now and far more than the DARK Act would provide.

It’s likely that the DARK Act cannot pass as it is currently written. However, there’s talk of a compromise that would involve QR codes—the small boxes on packages that can be scanned by a smartphone, which then takes you to the website where you can hunt for product information. Such codes are not an appropriate substitute for on-package labeling, and the only reason to use them is to hide information from consumers. More discussion on the problems with QR codes is in the Winter 2015 issue of *Wise Traditions*. Several legislators who have stated that they oppose the DARK Act have indicated that they would vote for this sort of a hollow compromise, raising concerns that it may have enough votes to pass.

We know that the biotech industry and big food companies desperately want a federal bill to pass before July 1, when the Vermont law for mandatory GMO labels would go into effect. Please watch for action alerts and take the time to call your members of Congress! Americans have the right to know—just as the citizens of over sixty other countries already do—whether there are GMOs in their food. 

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A Campaign for *Real Milk*

FARMER “FLIPS” FOR RAW MILK: THE STORY OF JEFF BIDDLE

By Sylvia Onusic

It is near milking time at Bear Meadows Farm near Boalsburg, just under the Tussey Mountain in central Pennsylvania, and not far from Penn State. What a beautiful sight! The cows are coming down from the pasture to the paddock outside the parlor, occasionally bellowing a long moo, which says it's milking time.

I stand outside with the owner of the place and tell him that the cows look beautiful, and that I especially like the white one. He says, “Yeah, it's all pasture, and that's Elsie May, an old girl.” In fact, he knows each cow by name, their personality and habits. Nearby three farm cats are lined up closely together in silhouette, along with Jeff's two guinea hens, anticipating that something good is about to happen. The farm dogs, Beauty and Susie, won't be ignored and wind their way around your legs looking for attention.

Jeff originally purchased five guinea hens at his wife's request, who read that they are great tick eaters. The females were killed by predators who left only a pile of feathers, but the two males remain, now fixated on Jeff, following him wherever he goes—his constant companions, even accompanying his truck into the field.

When I first turned into the long driveway framed by fields and made my way down the farm road, it was like a step back in time—the spring house on the left, the farm house set on top of the hill with crisscross curtains gently blowing on the clothes lines below it. I had to creep along so that I wouldn't take out a couple of Jeff's prime layers, some plump Rhode Island Reds ambling along. But they picked up to a strut when the wheels of my car came too near and veered off sharply out of the way. The duck and her ducklings made for the pond on the right and nipped into the water. Then

slowly I continued down to the barn, paddock and milking parlor. In the paddock a number of young cows stared curiously at me but soon went back to their business of wagging their tails to knock off the flies. Susie and Beauty gave me a barking escort all the way to the milking parlor.

GETTING INTO RAW MILK

The last time I saw Jeff, he was doing some custom carpentry at my house. We got to talking and he told me he was getting out of the carpentry business, and wanted to “hang out with cows.” He had farming in his soul. I didn't know the story and also didn't know whether he was pulling my leg. Jeff can be a great kidder. But imagine my surprise and delight to actually visit Jeff's farm for the first time.

Inside, Jeff maintains a consumer bulletin board in his milking parlor anteroom, which educates his customers about the types of bacteria in milk and the testing procedures required by various state and federal agencies. He pointed out his laboratory test papers, which were displayed with explanations on the customers' bulletin board. The scores were good, in fact exceptional—some of the best scores in the state it seems. Copies of some of these scores were sent to Dr. Ted Beals for his collection of raw milk testing data.

Until 1948, farm fresh milk (raw milk) and pasteurized milk coexisted legally. But in that year a federal mandatory pasteurization law ended national access to fresh milk. Now it is up to the individual states to determine whether fresh milk is legal. In Pennsylvania we are fortunate to be able to purchase raw milk at the farmgate and in specific shops.

In most European countries, especially member states of the European Union, raw milk is legal. It can even be purchased in automatic raw milk vending machines stationed in farmers

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markets and shopping centers, which are owned by the farmer and inspected by the local health authorities. The milk is changed every twenty-four hours and any changes in temperature are reported to the farmer's mobile phone. Over two thousand raw milk machines are now in operation in Italy alone.

IT'S ALL ABOUT TASTE

Estimates of the number of raw milk drinkers in the U.S. vary from ten to fifteen million, and the number continues to grow. When people are asked why they drink raw milk, the majority proclaim, "the taste." And Jeff's milk is creamy, its distinctive taste is determined ultimately by the soil and what is growing in it, something that the French call *terroir*. The plants and grasses growing on Jeff's fields and nourishing his animals are the product of this *terroir*, which ultimately translate into tasty milk.

Another major contributor to the taste of raw milk is the amount of butterfat which it contains. Cow breeds vary in the amount of butterfat in their milk with

Jerseys being high fat producers. Jeff's herd is a variety of breeds, among them Ayrshires, Jerseys, Guernseys and Holsteins, which contribute to the ultimate taste of the milk product in Jeff's bulk milk tank, but he tends to favor Guernseys.

The types and number of bacteria it contains also influences the taste of the milk. We know that bacteria can be friendly and good for digestive health, as well as useful, helping us prepare fermented dairy products like yogurt and kefir (probiotic); or, they can be unfriendly (pathogenic), which can make us ill. Pasteurization destroys some pathogens but more so the friendly probiotic lactobacillus bacteria, enzymes and healthful substances that raw milk contains. The beneficial bacteria in milk produce lactase, the enzyme that enables

digestion of the lactose in milk. Pasteurization renders the lactase-producing bacteria inoperable. Many people who are lactose intolerant and cannot drink pasteurized milk, can drink raw milk without problem, says raw milk safety expert, Ted Beals, MD.

SUCCESSFUL SOURING

The only raw milk that I could successfully clabber is Jeff's. Clabbering is my test of a positive bacterial milieu in raw milk. Clabbering was done in Grandma's day by putting a covered container of raw milk in a warm place, such as on the back of a counter or in a cupboard, for a few days depending on the time of year

and temperature of the room. After the souring process was finished, the thickened milk was used to produce outstanding pancakes and other baked goods. This milk product is still a popular traditional beverage in eastern and central European as well as Middle Eastern countries, especially during summer months. It has a refreshing smooth rich taste with an acid finish.

"Sour" is not the same as "spoil." Pasteur-

ized milk will not sour but it spoils because undesirable bacteria in the milk continue to grow during the refrigeration process. Pasteurization does not kill all bacteria, molds and fungus. But in raw milk, the probiotic bacteria multiply to retard spoilage and give the milk a smooth, rich taste with a tangy, refreshing flavor, which means that the probiotic bacteria are of high quality and intact. Jeff said that off-flavors in the milk are caused by the "wrong kind of bacteria present where it shouldn't be."

HEALTH BENEFITS

The second reason people give for drinking raw milk is it offers many health benefits. In the early 1900s, the "raw milk cure" was successfully used at the Mayo Clinic to cure a host of diseases. Up until World War II, a number



Jeff Biddle with a beautiful Ayrshire cow.

The beneficial bacteria in milk produce lactase, the enzyme that enables digestion of the lactose in milk.

Why would you want to continue standing in the way of your health-conscious constituents who simply want to legally drink the milk of their choice?

of studies compared the effects of raw versus pasteurized milk on animals and children, and most results favored the use of raw milk. After mandatory pasteurization began, these studies ceased.

Raw milk contains many nutritional and immune-enhancing properties. Pasteurization affects the nutritional quality of vitamins A, B₆, B₁₂, C, and D in the milk by reducing, inactivating, degrading or destroying them or their carrier proteins. In fact, artificial forms of A and D are added to pasteurized milk to make up the loss. Heat also denatures the protein in the milk and deactivates the minerals and the lactoferrin, which is necessary for absorption of iron. Lack of iron causes anemia in children, a serious condition that affects growth and mental ability. Lactoferrin also kills a wide range of pathogens.

RAW MILK FOR ATHLETES

Local athletes in the area are interested in Jeff's milk because of its health benefits. Tim Argiriadi, general manager of Victory Sports and Fitness in State College, Pennsylvania recommends raw milk to his clients, "across the board." Tim has been at Victory Sports for about five years. His sports career includes playing football at Penn State, professional football in the NFL Europe Draft 04, the CFL (Canadian Football League), and the AFL (American Football League). At Victory Sports, he says they see a variety of athletes from professional to high school. Tim explains that "nutritional protein is pivotal in the body's ability to perform, and a great source of protein is raw milk. The pasteurization and homogenization processes denature the protein and it loses its constituent nutritional quality, making the protein no longer as effective or bioavailable."

He says that he has been drinking raw milk for about three years, since one of his trainees

brought some to the gym. He is lactose intolerant, but tried raw milk and now views it as "a good staple in a nutritional regimen." It "brings a lot of value and packs a nutritional punch." His motto is, "If your body is your business, get plugged into raw milk."

Tim is especially interested in the CLA (conjugated linoleic acid) content of the milk. CLA is helpful for athletes because it plays a role in protein synthesis and muscle repair. "Unless the trainee has a food allergy, there is no reason that raw milk couldn't be a part of a daily beneficial routine."

Milk that is produced from cows on pasture is much higher in CLA than milk produced from grain- and corn-fed cows, says Dr. Ton Bars, an organic dairy expert in Austria. Research from Europe shows that CLA and omega-3 fatty acids are high in raw milk from cows on pasture and alpine grasses.

RAW MILK SAFETY

The government requires frequent testing of raw milk to ensure that it is safe for human consumption, which means that it does not contain organisms which are harmful to health. Milk safety is an ultimate goal in raw milk production.

In connection with milk safety, Penn State researchers are currently conducting a study funded by USDA of licensed raw milk dairies in Pennsylvania. Veterinarian Ernest Hovingh, PhD, from the Veterinary and Biosciences Department in the College of Agricultural Sciences, is heading the raw milk part of the study. About forty of the ninety Pennsylvania raw milk dairies with permits, including Jeff's Bear Meadows Farm, were recruited to participate in the study, which is part of a larger project entitled "Milk Safety Improvements for Milking Equipment and Raw Milk Production."

Researchers take samples of the raw milk



Tim Argiriadi, general manager of Victory Sports and Fitness in State College, Pennsylvania recommends raw milk to his clients, "across the board."

from the participating dairies over a set time period for analysis. Dr. Hovingh explained, “We are looking at the efficiency and effectiveness of bulk milk cooling, and monitoring the milk fat, milk protein, somatic cell count, standard plate count, preliminary incubation count, lab pasteurization count, Salmonella, Campylobacter, Listeria, and *E. coli*. Although not directly related to the objectives of the project, we are also providing participants with a ‘bulk milk mastitis pathogen analysis’ every month. This consists of culturing for, and reporting on, common mastitis pathogens such as *Strep agalactiae*, coagulase-negative staphylococci, and others.”

A RETURN TO THE FARM

Jeff’s barn and sheds are immaculate, white and clean, with just a faint scent of “eau de cow.” As he filled my containers from the bulk tank, Jeff told me a little about how he came back to the farm. When Jeff and his parents made an agreement that he could farm the land and raise cows on it, he started using conventional methods. But then came the milk glut and Jeff and many other farmers were in serious trouble. He came to raw milk production for financial reasons and admits that he was very hesitant to start, maybe fearful even, but after three months, there was no turning back.

When he decided to produce raw milk in 2005, one of his first tasks was to rehabilitate the pastures, which were damaged from conventional farming. He has about one hundred seventy-seven acres, forty-four of those in pasture. He had seen farms where the damaged pastures could not be rehabilitated in a lifetime because they were destroyed by pesticide use. Jeff used cow manure, chicken manure and planted Italian ryegrass, three different kinds of orchard grass, two kinds of clover and four kinds of chicory to start the process. In fact his “salad bar” pasture today is home to about twenty-eight milking cows, and alive with many different plants. In periods of dry weather he has a pasture planted with sorghum and sudan grass, which is extremely high in energy and grows fairly well during those times.

But sometimes, he says, his cows just prefer dandelion or leaves from his chestnut trees, seeking out the special minerals these plants provide. Jeff observes his cows, and he says, “unlike humans, they know what they should eat.” He told me that they are selective and sample many plants. One day Elsie May will eat clover while the next day she prefers orchard grass. There are trees bordering the pastures and sometimes a cow will wander over and munch on some of the leaves.

When he first started the cows on pasture, he gave them a bale of hay every day. But gradually he noticed that they weren’t finishing the hay and preferred the pasture. Now they eat only grass during most of the year, from mid-April through mid-December. His cows love the snow, he says. Last year they were on pasture most of the year. He pastures them in the winter in the field where he will grow corn the next spring. Daily he supplements them with a round bale of hay. What they don’t eat, they stomp into the ground and what they do eat comes out as manure to fertilize the field.

Jeff milks his cows twice a day. But, he says, cows like to be milked


2.4 times a day, according to dairy studies. He averages one hundred sixty gallons a month, and sells about forty gallons of raw milk weekly for three dollars a half gallon. The remainder of the milk is sold through a local co-op. Raw milk represents about 13 percent of his milk sales, which provides about one-third of the farm income.

Considering the price of his feed (pasture), the health of his cows, the price paid for the milk, and the satisfaction he and his family get from producing an excellent product, selling raw milk is a “no brainer,” he says.

He does not advertise but “word gets around” and gradually the customers come. One family buys eleven half gallons a week. Being near a college town, many of his customers are of foreign origin. To show his appreciation, Jeff hosts a “customer appreciation day” every September with live music, down-home food, great company (including the farm dogs, cats, and guinea hens) and raw milk to kick off a farm tour.

It was clear that Jeff was in awe, pleased with the complexity yet simplicity of the master plan. It was plain to see that his cows were healthy and so was the milk, according to the lab reports he gets every month. He told me that he works very hard to produce great milk, and his customers are pleased. They bring him gifts that they make with his milk to show their appreciation. One customer uses lactose from the milk to make beer.

Jeff is happy with the way things are going, and never plans to go back to conventional dairy farming. He says that grass farming and producing raw milk is “just fantastic.”

He has succeeded in hanging out with cows. His website is bear-meadows-farm.com/Why_Raw_Milk_.html where he has information about raw milk and also a photo gallery of “The Girls,” his milking cows. 

Sylvia P. Onusic, PhD, is a board-certified and licensed dietitian-nutritionist in private practice at drsylviaonusic.com. She holds her doctorate in public health education. Sylvia is a frequent contributor to Wise Traditions.

RAW MILK UPDATE: STATE RAW MILK BILLS

by Pete Kennedy, Esq.

In the 2015 legislative session, six states passed legislation increasing raw milk access. While it doesn't look like this year's session will be as productive, West Virginia has already passed a raw milk bill into law and at least a couple of other states have a good chance to do the same. Opposition to raw milk still exists but seems to be decreasing every year. This session about fifteen states have introduced bills that would increase raw milk access. Legislation includes bills for the following states.

HAWAII - SB 381 & SB 588

Currently raw dairy sales are prohibited. Two bills introduced last year have been carried over into this session. Senate Bill 381 would allow the distribution of raw milk and raw milk products through herdshares; the farm or dairy must be registered with the department of health but the department would have no rulemaking power over herdshares. Senate Bill 588 would allow sales at a farm or roadside stand; the health department may adopt rules to regulate production and distribution but must be consistent with laws in other states that allow the sale of raw milk and raw milk products. Both bills have been re-referred to the Senate Water, Land and Agriculture Committee (WLA) and to the Commerce, Consumer Protection and Health Committee (CPH).

MARYLAND - HB0079

Current law prohibits herdshares and the sale of raw milk for human consumption. House Bill 79 would legalize the distribution of raw milk and raw milk products directly from the producer to the final consumer through a herdshare agreement. The House Health and Government Operations Committee held a hearing on the bill on February 2nd; no action has been taken since.

MASSACHUSETTS - H.3648 & S.419

The legislature is in the second year of a two-year session. Current law allows the on-farm sale of raw milk by licensed dairies. House Bill 3648 would legalize the distribution of raw milk through herdshare operations. The bill is in the Joint Environment, Natural Resources and Agriculture Committee; a hearing was held last fall but no further action has been taken. Senate Bill 419 would allow licensed raw milk farmers to sell at farm stands located off the farm premises and allow the off-farm delivery either direct from the farmer, the farmer's agent or through a community-supported delivery system (such as a CSA). Delivery can be made direct to the consumer's residence or to a dropsite; for CSAs delivery can also be made in a retail setting. A hearing was held last October but no further action has been taken.

MISSISSIPPI - HB 1132, HB 1133 & HB 1143

Several bills increasing raw milk access have been introduced. Current law allows the incidental on-farm sale of raw goat milk from herds no larger than nine milk-producing goats. House Bill 1132 would expand raw goat milk access to sales at farmers markets and allow the on-farm sale of raw cow milk. There would be no limit on the number of milk-producing cows on the farm. The bill also clarifies that there is no prohibition against giving away or donating any raw milk to other persons.

House Bill 1133 would allow the distribution of milk through herdshares. It states, "Nothing...shall be construed as prohibiting the independent or partial owner of any cow, goat, or sheep from using the milk from such animal in its raw or adulterated form for the owner's personal consumption or other personal use." HB 1132 and HB 1133 were referred to both the House Committee on Agriculture and the House Committee on Public Health and Human Services; both died in committee.

The Mississippi On-Farm Sales and Food Freedom Act, HB 1143, was referred to the House Committee on Agriculture. HB 1143 would prohibit "any county, municipality or any other political subdivision of this state" from regulating [with the exception of local zoning restrictions] the retail sale of farm products direct to the consumer. The bill has a provision allowing the intrastate sale of raw dairy products as long as the products are displayed separately and are not commingled with pasteurized dairy products. Sales can take place on the farm, at farmers markets and through delivery. HB 1143 died in committee.

NEW JERSEY – S.1414 & A.696

Raw milk sales are currently prohibited in the state. Assembly Bill 696 and Senate Bill 1414 would allow licensed on-farm sale of raw milk and raw milk products; both bills state that a permit would not be required for a herdshare operation as long as there was a written contract between the farmer and consumer. Both bills have labeling and testing requirements. A.696 has been referred to the Assembly Agriculture and Natural Resources Committee; S.1414 has been referred to the Senate Economic Growth Committee.

NEW YORK – A03689

The legislature is in the second year of a two-year session. Current law only allows the on-farm sale by dairies with a permit. Assembly Bill 3689, which was introduced last year, would legalize herdshare agreements without a permit. A03689 was again referred to the Assembly Agriculture Committee in January.

OKLAHOMA – HB 3099

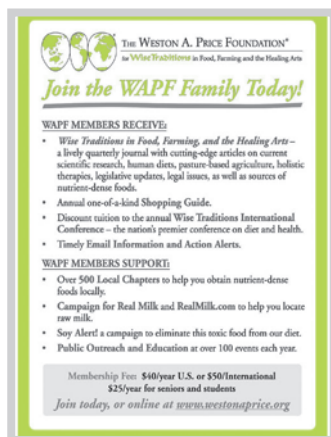
Current law allows the incidental on-farm sale of raw milk directly to consumers. House Bill 3099 would allow delivery to the final consumer's residence as well as direct-to-consumer sales at farmers markets as long as the milk container is labeled as "unpasteurized raw milk." HB3099 passed out of the House Agriculture and Rural Development Committee on February 10th.

RHODE ISLAND – S2092

Current law allows only the sale of raw goat milk to consumers with a doctor's prescription for it. Senate Bill 2092 is the re-introduction of the 2015 bill (S0091) and was referred to the Senate Environment and Agriculture Committee. Cited as the "Raw Milk Act," S2092 would legalize the sale of raw milk, giving the state Milk Commission power to issue rules governing the production and sale of raw milk. The bill itself contains several requirements: the milk must be sold within five days from the date of production, labeling and signage at the point of sale, a license is required for anyone selling either more than 20 quarts of milk or cream made from more than 20 quarts of milk.

UTAH – H.B. 144

Current law allows the sale of raw milk by a licensed producer with a majority ownership in the retail store where the milk is sold. Licensed on-farm sales are also allowed as well as the distribution of raw milk through herdshares by micro-dairies (10 goats or sheep or 2 cows in the herdshare program). The Utah Food Freedom Act, House Bill 144, would allow the intrastate sale of most foods, including all raw dairy products, direct from producer to consumer. A hearing was held on February 5th in the House Natural Resources, Agriculture and Environment Committee. HB 144 did not pass but an interim study group in the legislature will meet later this year to discuss it.



MEMBERSHIP POSTER

Membership is the main source of financial support for the many projects of the Weston A. Price Foundation. We appreciate your help to increase membership. We are happy to send a free copy of our membership poster to those who will display it.

The poster is 8.5" x 11" with a cardboard flap that allows it to stand. It goes well with our Dietary Guidelines booklet. It can be displayed at an exhibit, a doctor's office, a library, a farmers market, etc.

If you will display it, please write for a free copy: info@westonaprice.org.

VERMONT – H.426

Under current law, there is a two-tier system for raw milk sales: (1) on-farm sales of up to 87.5 gallons per week direct to consumers; (2) farmers meeting additional requirements are allowed to sell up to 350 gallons per week direct to consumers on the farm, at farmers markets, or through delivery.

Originally introduced in 2015 then amended, House Bill 426 would restructure raw milk sales into a three-tier system and allow for the sale of raw dairy products (as listed in the bill) with new weekly volume limits: (1) producers meeting basic sanitary requirements could sell on the farm up to 70 gallons of milk; (2) producers meeting additional requirements (e.g., recordkeeping and labeling) could sell on the farm up to 100 gallons of milk; and (3) producers meeting more comprehensive requirements could sell more than 100 gallons of milk on the farm, through delivery, at farmers markets and to CSAs. A license would also allow producers to sell raw milk (but not raw milk products) at retail establishments. H.426 was referred to the Committee on Agriculture & Forest Products.

WEST VIRGINIA – SB 387

Senate Bill 387 which would legalize the distribution of raw milk through herdshare agreements, is now law. See separate story.

There are currently Constitutional amendments before the state legislatures of Maine and Tennessee that would increase access to raw milk. If they pass out of the legislature, the Maine bill would be on the ballot in 2017 and Tennessee's in 2018.

The Farm-to-Consumer Legal Defense Fund has provided funding and/or consultation on several of the bills listed here. Further updates on the status of the bills will be posted as events warrant.

In response to an article entitled “Halting the Raw Milk Movement” by Cary Frye, at foodbusinessnews.net, Mark McAfee posted the following comment:

Dear Cary Frye,

As a member of the Raw Milk Institute and as a producer of legal raw milk in California with products in seven hundred stores and also as the fourth-ranked brand of organic milk in the USA, I must take complete exception to your conclusions that raw milk is unsafe and must be stopped.

The EU has done seventeen studies on raw milk. They are published and peer-reviewed. You can find them at the NIH and elsewhere. PARSIFAL, GABRIELA, KOALA, AMISH, LOSS and Von Mutuis et al., etc. Each and every one of them says this: raw milk is great for asthma and prevents ear infections, colds and eczema. Additional studies are now reporting that raw milk and raw kefir can cure Crohn's (an alternative to having your guts cut out and voiding in a plastic bag for life!).

One look at the conventional pasteurized markets tells us that pasteurized milk is dead and/or dying. The stuff is not being consumed in the market place and milk prices are cheaper than bottled water. Dairies are going bankrupt worldwide. Why? Because pasteurized milk is the most allergenic food in America and causes digestive problems like no other food. It is also a trigger for asthma. Raw milk producers have now embraced rapid testing systems like BAX PCR RT & MP and can now test down to one *E. coli* STEC cell in a sample and get test results back in fourteen hours.

“Pasteurization is an 18th century solution to an 18th century problem” (quote from UC Davis PhD milk researcher). We can do better, and raw milk dairies are doing just that. IDFA is supporting the wrong side of history. If we can put a man on the moon and count the DNA links in our genome, we can surely make safe raw milk for the next millennia. It is time to let go of pasteurization on this its one hundredth year of killing and start to embrace change. Remember this, breast milk is raw milk and universal agreement says breastfeeding is best. Breast milk is not sterile (it contains up to seven hundred different kinds of bacteria including pathogens), and there is a reason for this. Our immune systems demand all of the proteins, fats, vitamins, enzymes and yes. . . bacteria for our health. Move over dead milk, you have had your one hundred years. Clean, alive, fresh, delicious and safe raw milk is back and here to stay! One look at consumer voting says it all. Consumers no longer trust the CDC or the FDA or the government—they trust their farmers far more.

Mark McAfee, CEO Organic Pasture Dairy
Fresno, California

WEST VIRGINIA: Raw Milk Bill Now Law

Raw milk is now legal in West Virginia, the state that previously had the most anti-raw milk laws in the United States. On March 3, Governor Earl Ray Tomblin signed Senate Bill 387 (SB 387), a bill that will allow the distribution of raw milk through herdshare agreements.

Last year, Tomblin vetoed a herdshare bill that passed through the legislature. The national dairy groups, the National Milk Producers Federation and the International Dairy Foods Association successfully lobbied the governor to veto the bill last year but were quiet this time around. The Food and Drug Administration (FDA) provided testimony against SB 387, but the testimony had little impact.

The margins for the bill were bigger in both the House and the Senate than they were last year. Supporters of SB 387 flooded the governor's office with calls; there were few if any calls opposing. The bill officially becomes law in May.

Until now, West Virginia easily had the most anti-raw milk laws on the books in any state. West Virginia regulations prohibited the sale of raw milk for human consumption, the sale of raw milk for pet consumption, herdshare agreements, and even giving raw milk away.

Under SB 387, raw milk consumers entering into a herdshare agreement with a dairy must sign a document acknowledging "the inherent dangers of raw milk." The dairy farmer must have a signed agreement with any "responsible party" obtaining milk through the herdshare; the farmer must file a copy of each agreement with the commissioner of agriculture. The shareholder dairy must meet health requirements established by the state veterinarian for milk-producing animals. There are reporting requirements if an illness is directly related to consumption. The commissioner of agriculture may propose rules governing herdshare operations but is not required to do so. Any proposed rule must go through the Legislative Rule-Making and Review Committee before going to the full legislature for a vote on approving the rules. Several strong supporters of the bill currently serve on the committee.

There are now 42 states that have laws allowing legal access to raw milk. West Virginia had been one of the toughest hurdles remaining in the effort to have legal access in all 50 states.

The Farm-to-Consumer Legal Defense Fund provided funding for lobbying efforts to pass the bill. Congratulations to Tina Creamer for having her years of work on legalizing distribution of raw milk in the state pay off.

MEMBERSHIP IN THE WESTON A. PRICE FOUNDATION

Thank you for your membership and for encouraging others to join! Your membership fees support these many projects:

- Hosting and maintaining our huge website
- Publication and mailing our lively and informative quarterly journal
- Printing brochures and Healthy 4 Life booklet
- Legislative work and updates by Judith McGeary
- Financial support to the Farm-to-Consumer Legal Defense Fund
- A registered nurse on call to answer baby questions
- Phone and email correspondence to answer countless inquiries
- Action alerts sent for events and legislative issues
- Raw milk project for education and access
- Registration fees and materials for over one hundred exhibits per year
- Research on traditional foods and the fat-soluble activators
- Maintaining the WAPF office and four paid employees
- Shopping Guide research and publication
- Hosting conferences
- Posting on Facebook and blogs
- Soy prison lawsuit; soy petition to FDA
- Advertising in other publications
- A publicist doing press releases and arranging media interviews

Healthy Baby Gallery

Moses Gabriel at fourteen months has a taste for finer foods like liver pâté, dried sardines, raw cheese and his current favorite, salmon roe, which also happens to be super-nourishing. A physically strong and independent baby, he thrives on interactions with people, which bring him great interest and delight. Additionally, spending fourteen to sixteen hours a day sleeping (including naps) since he was five months old has helped him to maintain a fun and relaxed disposition. We give honor and praise to God for Moses's good health and to WAPF for sharing their timeless knowledge with us!



Malcolm Robert McColl was born at forty-one weeks on April 28, 2015. His parents are long-time WAPF supporters and his mother is a chapter leader. Despite morning sickness, his mother attempted to eat a nutrient-dense diet during pregnancy that included eggs, cod liver oil, and lots of full-fat, raw and cultured dairy products. Malcolm never displayed any signs of distress during the long, forty-two-hour labor and was born healthy and beautiful at ten pounds, six ounces. He was very strong and alert—breastfeeding right away and beginning to lift his head within a day or two—with a full head of thick, dark hair. He continues to be in the highest percentiles for weight and height, has eight well-spaced teeth, and possesses a remarkably even-tempered, outgoing, happy personality. Malcolm's favorite foods include breast milk, eggs, meat, bananas, and sour cream.

Robust, healthy Elijah James (EJ) Williams was seven pounds at birth and eight pounds four ounces one month later on mom's healthy breast milk. Mom followed a nourishing traditional diet all during pregnancy and now in lactation, including eggs, liver and cod liver oil. Birth of this first child was easy, lasting only three hours. EJ is a very cheerful baby, who rarely cries.



Dave and Tori are the parents of beautiful Ariella. They both ate a WAPF-inspired diet for a few years before getting pregnant with her. Tori had very bad morning sickness and drank raw milk every day of her first trimester. She gave birth to Ari three weeks early at a birthing center with only a ten-hour labor. Despite the early birth Ari had no problems warranting a NICU stay. She has been exclusively breastfed, and at six months her mom started feeding her nutrient-dense foods. Some of her favorites include avocado mixed with beet kvass, organic pumpkin mixed with pastured beef liver and bone broth, and lacto-fermented oatmeal mixed with whole milk yogurt and organic fruit. Everyone they meet comments on her alertness and intelligent gaze.

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STILL SERVING AFTER SIXTEEN YEARS!

Our first chapter list in the Spring 2000 issue of *Wise Traditions* contained eleven chapters. By the end of 2000, we had thirty-nine chapters. Today, sixteen years later, we now have five hundred twenty-seven!

We have eleven chapter leaders who started in 2000 and are still volunteering their time as beacons of light, educating and guiding people to nourishing, healthy foods. We salute the following:

Started Spring 2000:	Louise Turner (MA originally, now NH)
	Kim Lockard (MI)
	Kathryn Stockdale (OH)
Started Summer 2000:	Doug Flack (VT)
Started Fall 2000:	Bari Caine (CA now NV)
	David Wetzel (NE)
	Thomas Earnest (NM)
	Dina Falconi (NY)
	Jill Teibor-Franz (NY)
	Silvana Castillo (NS, Canada)
	Joseph Ouimet (ON, Canada)

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only that that ever has.” Margaret Mead

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WASHINGTON, DC CHAPTER MEETING

Chapter leaders in the DC metro area met in December to brainstorm about ways to collaborate on events, reach out to potential members, and share resources. Social media expert Jenna Talbot led a discussion on how to best use technology to meet chapter goals. They were joined by Janice Curtin (front, center) of the Alexandria, Virginia chapter.



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- GA Carrollton/Douglasville/Dallas: Lainya Hutchins (404) 403-1076, mlwhutchins@gmail.com
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CHAPTER RESOURCES

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

LOCAL CHAPTER LIST SERVE

Thank you to Maureen Diaz a chapter leader in Pennsylvania, for administering the local chapter chat group. New chapter leaders can sign up at <http://groups.yahoo.com/group/wapfchapterleaders/>

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- Lake County/Northwest Suburbs: Linda DeFever (847) 526-6452, ocfever01@yahoo.com
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- IN Bloomington: Larry Howard (812) 876-5023, info-wapf@betterlocalfood.org
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A BIG CROWD AT FIRST CHAPTER MEETING

The newly formed Westford, Massachusetts Chapter, led by Kathy Lynch and Lynda Cox, launched with a "Meet Local Farmers and Foodies" event.



Local Chapters

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The Weston A. Price Foundation currently has 512 local chapters;
405 serve every state in the U.S. plus the District of Columbia
and 107 serve 27 other countries.
Welcome to our new chapter from Italy!

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<https://www.facebook.com/groups/541350722565268>, <http://www.meetup.com/Weston-A-Price-Foundation-Las-Vegas-South-Henderson-Chapter/>
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<http://health.groups.yahoo.com/group/rochesterNYwestonaprice/>



DR. TIM MILLER ADDRESSES WESTERN NEW YORK CHAPTER

The Western New York chapter had a record-breaking turnout of ninety-nine attendees for their January meeting. The topic was essential oils and the talk was given by Dr. Tim Miller, ND, MAC, LAC, RA. The WNY chapter just had its second anniversary of meetings.

Local Chapters

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LOCAL CHAPTER BASIC REQUIREMENTS

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

OPTIONAL ACTIVITIES

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

Local Chapters

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SOUTH DAKOTA CHAPTER AT YANKTON HARVEST HALLOWEEN

A picture of our booth at the Yankton Harvest Halloween. Many spooky people visited us to hear about nutrient-dense foods while savoring organic popcorn made with coconut oil and real organic butter. The popcorn popper was a cast off that was able to be fixed, so it will be a regular feature of our booths. The aprons in the background were constructed from WAPF convention bags.

Mary Walkes
 Yankton, South Dakota chapter leader

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MADISON, WISCONSIN CHAPTER AT THE MADISON WELL EXPO

Carolyn Graff (Madison, Wisconsin chapter leader)
and Jenny DeLonay share WAPF information at
the Well Expo in Madison on January 16, 2016.



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ASHLEY LEWIN

March 22, 1966 – February 21, 2016



Ashley Lewin was a caring, compassionate and talented naturopathic doctor who embraced the principles of Weston A. Price and shared this knowledge with her patients, friends and family. She has been the motivating force for many to change their way of life and switch to real food. She will be missed by so many who loved her. Since spring 2012, she has been a volunteer local chapter leader in Riverhead, New York. The Weston A. Price Foundation extends sympathy to her family and friends, and gratitude for the generous service Ashley gave to help others.

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ROMANIA

Ilfov: Raluca Schachter 0736 364 687, ralucaschachter@live.com, <http://chapters.westonaprice.org/snagovrm/>

SCOTLAND – see United Kingdom

SLOVENIA

Soca Valley: Vesna Veliscek 00386 41 432 488, vesna@slocally.com, www.slocally.com

SPAIN

Madrid: Ana de Azcarate 0034-616821039, aquilina68@yahoo.com

SWEDEN

Stockholm: Johanna Gunnarsson 46 76 040 7927, Johanna@stockholmnt.se

SWITZERLAND

Bern: Judith Mudrak rohrmilchjudith@gmail.com

Geneva: Lauren Haddad-Olivet 41 76 695 60 00, lauren.haddad@gmail.com

UNITED KINGDOM

ENGLAND

Cheshire: Carol Dines & Silvie Hall, 01270 873322 wapf.cheshire@outlook.com, <https://www.facebook.com/WAPF.Cheshire?ref=hl>

Derby: Russell Davison 01332 737216, Russell@davisonproperty.co.uk

Herefordshire: Sally Dean 01432 840353, sally@aspenhouse.net

Kent: Keli Herriott-Sadler 01732 354 527, keli@herriott-sadler.co.uk

London: Philip Ridley philridley@hushmail.com, <http://chapters.westonaprice.org/londonuk/>

Wise Traditions London, Festival for Traditional Nutrition Phil Ridley 01442 384451, westonaprice.london@gmail.com, www.westonaprice.org/london, www.meetup.com/westonaprice-london

East London: Deborah Syrett 020 8518 8356, medical.herbalist@ntlworld.com

Nottingham, East Midlands: Claire Jessica Backhouse 0044 79 8046 2874, claradynamic@hotmail.com

Surrey and Hampshire: Diana Boskma 44 1252 510 935, dboskma@gmail.com

UK resource list: www.naturalfoodfinder.co.uk

SCOTLAND

Edinburgh: Frances Bavin 07505 053333, frances.bavin@gmail.com, <http://www.meetup.com/westonaprice-edinburgh>

WALES

North Wales: Ben Pratt 07952 555811, info@naturalfoodfinder.co.uk, www.naturalfoodfinder.co.uk



WAPF AT THE GREEN BABY FAIR

South Miami-Dade County chapter leader Mary Palazuelos-Jonckheere with Michael Costa, accupuncture physician and WAPF member, display WAPF materials at the Green Baby Fair, October 10, 2015. Mary offered free tastings of sauerkraut and kombucha. Reports Mary, “Many people complimented the WAPF table as the most attractive of the fair.”

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CO

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

DC

CSA: Hi-Brix, nutritionally dense, biodynamically grown kitchen vegetables, grass-finished beef, pastured pork, broilers & eggs. Openings for 2015 season in DC Metro area. Contact Allan Balliett, info@freshandlocalcsa.com (304) 876-3382, freshandlocalcsa.com.

MA

Many Hands Organic Farm in Barre, MA Certified organic grass-fed lard, tallow, pork stock, chicken stock, beef stock, pork, chicken, turkey, beef and 22 weeks CSA. www.mhof.net; farm@mhof.net; (978)355-2853.

MD

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

Nick's Organic Farm. Grass fed beef (no grain ever), free range eggs, pastured chicken & turkey. Liver, organ meats, & bones. Organic poultry feed. Pick up in Potomac or Buckeystown. Our livestock are rotated to fresh pastures on our fertile organic soils and receive organic feed, no hormones, antibiotics, or animal parts. We raise our own hay, raise and grind our own grain into poultry feed and process our poultry. Quality Organic Products since 1979. (301) 983-2167 nicksorganicfarm@comcast.net - www.nicksorganicfarm.com.

CSA Shares Shipped to your Doorstep! - A Taste of Southern Maryland **will ship** CSA shares to the doorsteps of all members. Join today and receive farm fresh produce and value-added products on a weekly basis. All producers are Southern Maryland farmers or

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MI

Creswick Farms. Dedicated to raising healthy, happy animals—lovingly cared for just as Mother Nature intended—which provide high-energy, nutritious and delicious food sources for health-conscious individuals. No antibiotics, steroids or GMOs ever fed to our animals! (616) 837-9226, CreswickFarms.com.

MN

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

MS

Nature's Gourmet Farm raises nutrient dense grass-fed beef, pastured pork, and pastured

If people let government decide what foods they eat and what medicines they take, their bodies will soon be in as sorry a state as are the souls of those who live under tyranny.

Thomas Jefferson

broilers. Animals are hormone, antibiotic, and GMO free! We service South Mississippi, Alabama and Louisiana. For details and order information visit our website at www.natures-gourmetfarm.com.

OH

Sugartree Ridge Grassfed. Openings in a 100% grassfed herdshare with nine delivery sites in the Cincinnati area. No grain, no silage. Sixteen cows (cross between Jerseys, Guernseys, Brown Swiss and British White) grazed year-round on sixty acres rotating through thirty paddocks (which are allowed to grow for sixty days between grazings and are spread with organic, Albrecht-based mineral supplements). Nutrient-dense milk, family-friendly farming and holistic stewardship. 6851 Fair Ridge Road, Hillsboro, OH 45133 or Cincinnati area: Bill & Marylou Wilson (513) 625-0197.

OR

Windy Acres Dairy. Herd share providing grass-fed raw milk, cream, cultured butter, sour cream, kefir, yogurt, plus marketing of livestock (soy-free beef, lamb, pork, turkey, chicken) eggs, honey and by-products. windyacresdairy.com, windyacres26@gmail.com for more information or call (541) 613-5239

PA

Bareville Creamery 100% grass-fed. We offer raw traditionally cultured butter from our grass-fed cows. **We will ship** to you or visit our farm to pick up. Daniel & Katie Zook, Leola, PA (717) 656-4422.

Fresh grass-fed raw milk, cream, butter, yogurt & cheese - veal, soy-free poultry, free-range eggs, grass-fed beef and lamb. Frozen meats also available. **We will ship.** You are welcome to stop in or give us a call. Mark & MaryAnn Nolt (717) 776-3417.

Grass-fed lamb, pastured Tamworth pork & piglets, pastured chicken, honey, Sheep Camp, farm tours, Adopt-A-Sheep & more. Visit Owens Farm Sunbury, PA, owensfarm.com (570) 286-5309, info@owensfarm.com

We have raw butter from 100% grass-fed cows. **We will ship** or you stop by. Also non-GMO and soy-free pork. Henry and Fanny Zook, Bethel, PA (717) 673-6365.

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

Raw milk for sale and hard cheese. Specializing in A2-A2 milk. Other dairy products also available through buying club. Also, free range brown eggs, non-gmo chickens, and Thanksgiving turkeys. Located in central PA, 1 mile off interstate 80. For more information call (570) 726-4332 ext. 2.

Wentworth Dairy. Grass-fed raw milk, raw milk cheese, free-range eggs, pastured pork, grass-fed beef. We are located 8 miles from MD state line. Family farm, all natural grass-based, Ayrshire and Jersey cows. Rob & Bonnie Wentworth, 1026 River Road, Quarryville, PA 17566, (717) 548-3896.

VA

Salatin family's Polyface Farm has salad bar beef, pig-aerator pork, pastured chickens, turkeys and eggs, and forage-based rabbits. Near Staunton. **Some delivery available**. Call (540) 885-3590 or (540) 887-8194.

WI

All natural, grass-fed, to excite your taste buds, beef, pork, turkey, chickens and eggs; **will ship**. Located in the driftless area of Wisconsin Pleasantviewfarmswi.com (608) 553-0787 Email mkhamann86@gmail.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.

CRAFTS

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

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!**

Share your passion for food with friends and family! The Diet for Human Beings affirms our human requirement for fats, with less emphasis on starchy carbs. "An Hour To Watch - 30 Days To Try - Your Life Will Never Be The Same" on dietandhealth.com.

EMPLOYMENT OPPORTUNITIES

HIRE STOOL DONOR- Child with autoimmune disease needs fecal transplants. Donor WAP-type diet. Adult or child over 1 year. FTP used successfully for son. 325-261-8870 cececebrown@gmail.com. Per GI-doctor, son needs to continue FTP for limited course. Prior donor moved overseas.

Mesa Farm Market, located 12 miles from Capitol Reef National Park in central/southern Utah, needs a farm manager. The current manager is retiring. This is a wonderful long-term opportunity for a person or persons truly interested in a healthy and sustainable lifestyle. Pastured goats, raw milk, cheese, eggs, chickens, pigs, organic produce, orchard, fermentation, artisan sour dough bread etc etc. Small market on site and other business opportunities available. Infinite opportunities. For more information see mesafarmmarket.com; facebook.com/pages/Mesa-Farm-Market/259163903354?ref=hl or mail us at mesafarm@mesafarmmarket.com

WAPF-Inspired Fine Dining Restaurant Now Recruiting Talent. *Farmageddon* filmmaker, Kristin Canty is hiring talent for her new venture, Woods Hill Table, a traditional foods restaurant in her home town of Concord, MA. To our knowledge, this is the first-ever

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WAPF inspired fine dining restaurant. From frying in beef tallow, soaking grains, and raw fermented foods to serving kombucha flavor of the day on tap, Kristin is implementing the WAPF dietary guidelines and changing restaurant history. If you'd like to be a part of this exciting culinary project, her Concord Restaurant Group is looking for a service manager, servers, reservationists, chefs and line cooks. Contact Kristin@woodhilltable.com 24 Commonwealth Ave, Concord, MA, 01742 woodhilltable.com, jobs@woodhilltable.com, (978) 369-6300.

HEALING ARTS

Integrative Diagnosis (ID) was developed by John Kozinski MEA to help you understand your overall health condition so traditional foods can be used for your healing or health maintenance needs. For ID Classes or a health consultation call: (413) 623-5925 macrobiotic.com.

HEALTHY PRODUCTS

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

KEFIR: Making kefir at home just got easier with KEFIRKO! This innovative new tool from Europe allows you to culture and strain your milk or water kefir grains with ease. And the community at KEFIRHOOD.COM will connect you with others in your area who have kefir grains to share! To learn more about KEFIRKO, visit kefirko.com.

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HOMES & LAND

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EcoDream home. 3.25 acre organically gardened, wooded property backs to protected watershed with hiking/equestrian trails. Keep animals or walk to boarding stable. Modern log home, must-see kitchen, 3BR, 3BA, finished basement, wood stove, decks, stone patio. Rockville, Maryland, 15min. from Shady Grove Metro red line. City convenience, country farmette feel. \$550K Call Michelle (301) 330-4428. Member WAPF

For Sale: Pristine Spring with 160 AC in South Georgia. 20 Min from Tallahassee, FL. It comes with bottling permits. Water test and more info available. If interested, Call Joanne Mendez, Realty (850) 445-1910.

Home Opportunity. Acreage with a 4-bedroom house for rent on organic farm in south central South Dakota. Barn, corrals, and small pastures available. Located on a gravel road 2 3/4 miles off state highway. This is a second farmstead a mile from our farmstead. High speed internet access. Good opportunity for a home-based business. Rental rate depends on what you use. (605) 842-3108.

INTENTIONAL COMMUNITY

Farm family or individual needed to help set up and live on pristine 164 acre former raw dairy farm and cheese making facility in SW Washington state. If interested, please send email to Lawren@wellaroo.com with "dairy farm" in the subject line.

Small farm near Tampa FL looking for others to partner with us in our farming efforts. Have detailed ad in Eager Farmer, eagerfarmer.com and listing in www.ic.org under Ecofarmfl Tampa FL. Small dairy (water buffalo), pigs, vegetables, cane syrup, and other sustainable, permaculture related farming ventures. Direct farm sales. ecofarmfl@yahoo.com, (813)754-7374.

INVESTORS NEEDED

"Get An Oil Change" is a documentary film showing one nutritionist's vision for a population to embrace once again the coconut — essentially, for the people of the Cayman Islands to change their oil in order to change their health. Sally Fallon Morell is featured in it. Check out the Facebook page, [Facebook.com/GetAnOilChange](https://www.facebook.com/GetAnOilChange), as well as the Vimeo teaser vimeo.com/118666649. You can make a contribution by "tipping" us using the tip jar on the Vimeo page.

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WAPF RESEARCH

STUDY ON HEALTHY BABIES: Johanna M. Keefe, MS, RN, GAPs, Advanced Holistic Nurse, & Gena Mavuli, MA., NC are seeking volunteers for a PhD research project in Transformative Studies through CIIS (California Institute for Integral Studies). If you have had a healthy baby using the WAPF dietary guidelines, they would like to hear from you. They would like to interview you by Skype or Facetime, or in person if you are located in New England, Northern California or North Carolina—. <https://realfoodsuccesstories.wordpress.com/>, growingSUCCESSstories@gmail.com, (978) 290-0266.

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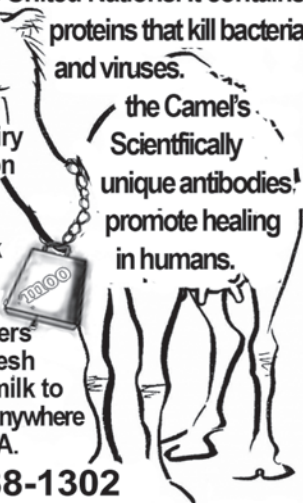
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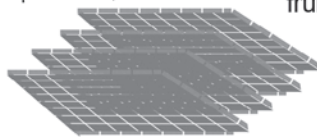
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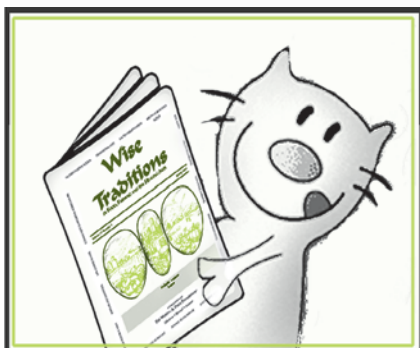
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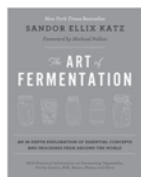
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The second manual, *Iqaluich Niginaqtuat*, *Fish That We Eat*, provides information regarding the traditional use of fish, their processing, recipes and eating enjoyment. It was compiled from the local traditional fish knowledge of northwest Alaska and was partially funded and placed on the web by the U.S. Fish and Wildlife Service.

The third manual in this series will similarly detail the traditional Inupiat processing techniques and recipes for sea mammals.

Presently there is no funding to support this work. Any suggestions would be welcome. The web link to *Iqaluich Niginaqtuat*, *Fish That We Eat*, is below. The report is located under the U.S.F.W. Northwest AK section. From here you can read it and/or download and print it. It should be printed double-sided due to the length (341 pages), including 100+color photos, sketches.

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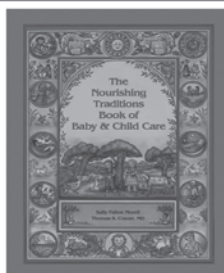
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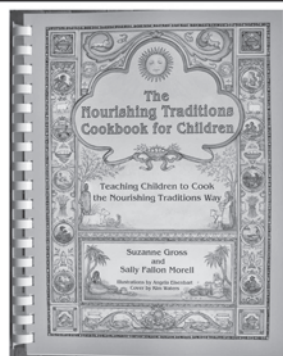
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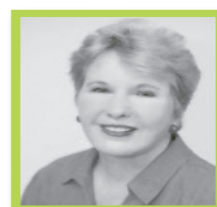
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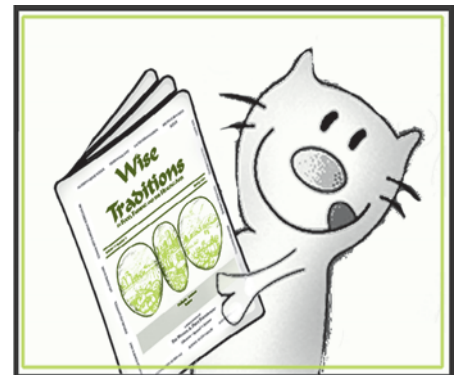
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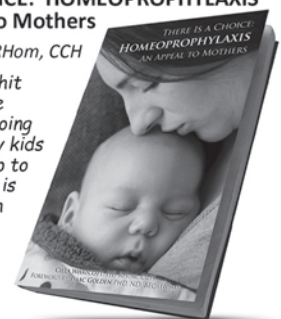
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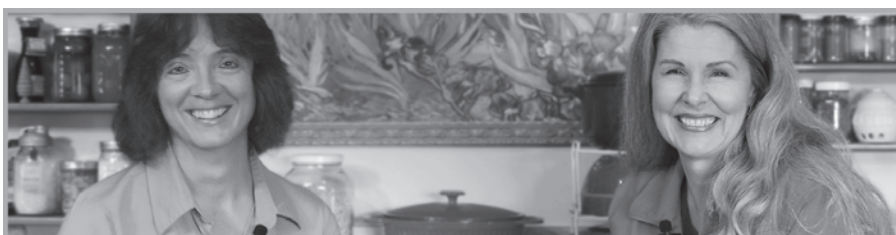
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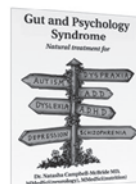


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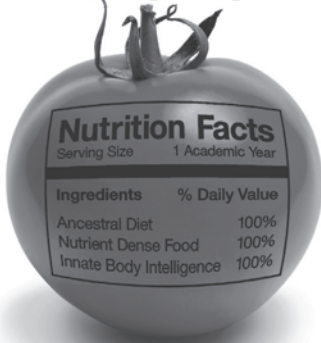
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