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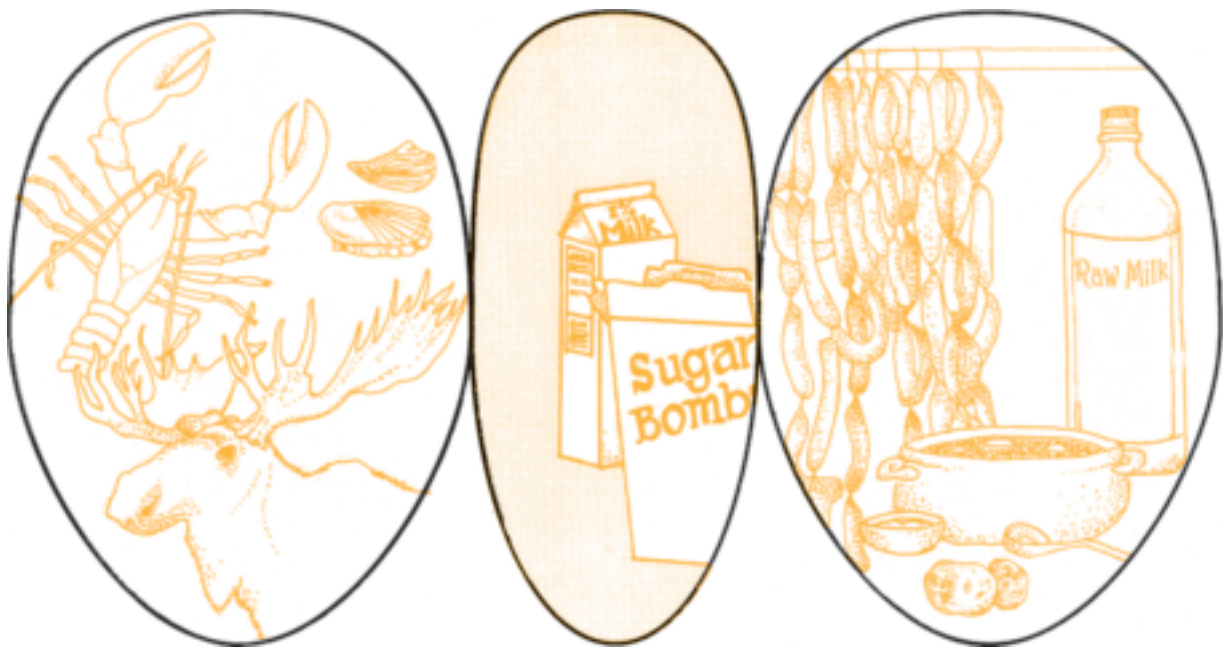
NURTURING THERAPIES

Wise Traditions

IN FOOD, FARMING AND THE HEALING ARTS

Volume 10 Number 2

Summer 2009



Treating Low Metabolism
A Thyroid Treatment Protocol The Great Iodine Debate
More Saturated Fat Attacks Non-Gluten Sourdough Baked Goods
Healthy Popsicles A Treatment for Herpes

A PUBLICATION OF
THE WESTON A. PRICE FOUNDATION®

Education ♦ Research ♦ Activism

TECHNOLOGY AS SERVANT

SCIENCE AS COUNSELOR

KNOWLEDGE AS GUIDE

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THE WESTON A. PRICE FOUNDATION®


Education ♦ Research ♦ Activism

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

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

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

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

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



Wise Traditions

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President's Message

This issue focuses on the complex subject of thyroid and adrenal health, two critical supports for optimal human biochemistry. Thyroid problems and adrenal fatigue respond well to traditional nutrition—and are negatively impacted by the modern diet—yet these conditions often require additional help in the form of thyroid or adrenal cortex hormones. The authors featured here, Dr. Bruce Rind and Dr. John Dommissie, have both developed successful protocols to treat these conditions. Yet their treatment plans differ in many respects—there are no easy answers in the fields of medicine and nutrition, least of all in the treatment of thyroid and adrenal problems!

We also present an article on iodine—another subject fraught with controversy. Iodine status affects not only thyroid function, but also growth, fertility, intelligence and breast health. Yet too much iodine can contribute to thyroid problems. How to optimize iodine status? That is the question!

I would like to take this opportunity to thank our columnists for keeping us up to date, issue after issue. Thanks to Pete Kennedy for monitoring all the legal and legislative goings-on regarding raw milk. The increase in state bills for liberalizing access to raw milk plus a reduction in legal confrontations between farmers and state governments is a sign that we are making real progress in this field.

Thanks also to Judith McGeary for her calm, cunning and persistent campaign against the National Animal Identification System. Judith provides the combination of level headedness and steely opposition that we need to defeat this monstrous proposal. Her updates keep us all informed and provide specific activist steps we can all take to prevent the implementation of NAIS.

We also appreciate Mary Enig for her ongoing expertise on fats and oils, Kaayla Daniel for keeping us up to date on the problems with soy, Tom Cowan for his insights into alternative treatments, Tim Boyd for his amusing DVD reviews, Joette Calabrese for her homeopathy column and Jen Allbritton for her wonderful ideas on feeding growing children.

At the office we have been focusing on the launch of our new website (which hopefully will be up and running by the time this journal reaches you) and putting the final touches on conference plans. We have an outstanding list of speakers for *Wise Traditions 2009* and will be featuring subjects ranging from the highly scientific to the intensely practical. Since this year's conference will be held in the midwest, outside of Chicago, we are offering several tracks on grass-based farming and direct marketing. Conference mailers will be going out shortly—meanwhile, you will find details on page 14. Please save the dates of November 13-16. We look forward to seeing you there!

Letters

HEALTHY TWINS

Since the birth of my twin girls, Moriah and Tsameret, almost four years ago, I have wanted to let you know how grateful I am for the information provided by the Weston A. Price Foundation.

I started on a WAPF diet as I began my journey to conceive almost ten years ago, continued through my pregnancy, and I got the girls started on it from birth.

Being an older mother I did not produce enough milk for twins and started them on the homemade formula in addition to breastfeeding. What an incredible resource it was to have your recipe for infant formula. I was so relieved not to have to use commercial formulas (even the organic ones are loaded with rice syrup). It was a pleasant ritual to prepare their bottles, twelve at a time, and put them in the fridge. I was still breastfeeding them at age three, in addition to the all the good foods and raw milk that we can find and/or grow ourselves.

Thanks to your advice, the first solid foods my girls had were warm egg yolks with grated raw organic chicken livers. They loved it and still like to eat chunks of frozen raw liver as a snack! One of my girls loves her soft boiled egg (especially the yolk) and will often eat two in the morning. The other is more of a yogurt girl. They both love their oatmeal with plenty of butter and raw milk on top. They also willingly take

their cod liver oil and probiotics every day. Having had cod liver oil since birth, I guess they like the taste! They like to eat raw steak or hamburger, which sure makes feeding them easy! They also enjoy sushi. For a long time they ate spoonfuls of plain butter, which I make myself twice a year in quantity from the rich yellow cream of spring and fall. They also love to eat chicken skin and to chew on chicken bones and cartilage. And in their bottles they get homemade



chicken stock as often as they get raw milk.

They also enjoy lacto-fermented foods, beet kvass, dried sardines, canned fish and vegetables. When they were teething, they gnawed on broccoli stems.

I am just amazed by the robust, earthy, and mature taste my girls have

developed for foods that most toddlers won't go near. Other people are amazed by their appetite and their willingness to try new foods at least once. I can only attribute it to the good advice I received and followed from your articles. I have simply introduced them to good food and stayed away from the junk, which is the way my husband and I eat, too, of course. It really is easy to get toddlers to eat right when you do it that way. I see many mothers with young children,

even those who consider themselves healthy cooks, who struggle with sugar addiction and discipline problems. In fact, I am shocked at how most people feed their children, especially since I have seen how easy it is to give a child a healthy, robust start in life by simply choosing the right foods. My girls fight sometimes and have their melt downs, and ask for candy, but they are well behaved, verbally articulate, reasonable and good natured. I credit their diet to a large extent because I am by no means the perfect parent.

One more thing: we went to a dentist recently for their first checkup and they are cavity free! Apparently, this is rare these days. I was sure they would have no caries, but needed to confirm it. They were so cute, sitting on my lap, opening their little mouths wide for the dentist, feeling so grown up.

Lucia Ruedenberg-Wright
New York, New York

Letters

THE GOODNESS IN RAW SPRING MILK

As an herbalist and lover of weeds, I have great respect for plants. Nature provides mankind with uncountable wild plants for our enjoyment and healing. Many of these uncultivated edibles grow right in our own back yards and are highly medicinal in various strengths and properties.

The farmer has these same plants in his fields, where his animals enjoy those highly nutritious grasses and weeds instinctively. Among these weeds is one called onion grass, which is in the allium family. One may wonder why it is even there. Some people can detect its flavor in the milk if the cow gets into a patch of it. Have we ever thought about why such a “nasty” wild edible might be there, available for animals to get a hold of and eat, which “ruins” the taste of the milk?

Consider the fact that the constituents of allium are natural antibiotics. Perhaps the cow needs to eat this in the spring in order to clean her gut after a long winter without fresh grass. Can nature really make mistakes?

Every spring, I eagerly wait for the new spring weeds to return and I’m thankful when they finally emerge from the ground. It seems to me that if allium can clean the guts of an animal, it can also clean our own through the animal’s milk. I add bushels of it to our wild spring salad mix, to help

clean the blood! So when we receive this wonderful spring milk, we might consider its natural medicinal benefit and thank our farmers for providing us with the most incredible goodness on the face of this earth.

Animals seem to be much wiser than humans, and we can only learn from them. So the next time one considers returning milk to the farmer because we don’t like the “interesting” spring flavor, we might consider the goodness nature wants to provide for us.

Through many travels in Switzerland, I’ve spoken with numerous elderly individuals about raw milk. Most of them refer to the war time, when there were great shortages of food. They’ve all told me that every liter of milk was

treasured and used anytime of the year including spring. Nothing was ever thrown out, except the low fat milk, which was used to fatten and feed the animals.

An important study done in the Swiss Alps (Collomb et al. 2001; 2002a) showed that the more diversity of plants, herbs and grasses available for the animals, the higher the nutrition in the milk products. . . and yes, Switzerland has onion grass!

Judith Mudrak, Chapter Leader
Southampton, New Jersey

Judith leads a tour of WAPF members to study traditional dairy products and other foods in Switzerland each summer.

STATIC CONTRACTION TRAINING

I feel compelled to tell my story after reading about SuperSlow® Weight Training in Dr. Cowan’s article in the Fall, 2008 issue of *Wise Traditions*. In 2000 I had a motorcycle injury with pelvic fractures, which laid me up for about a year. I must have developed a “disuse osteopenia” which was not revealed until June, 2006 when I sustained a hip fracture when skiing on ice, and which was followed eventually by a DEXA scan revealing the osteopenia. This got me on the road to tradi-

tional foods and increasing knowledge about minerals and vitamin D, amongst other things.

Eventually I resumed my gentle weight training, getting into SuperSlow





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again. This led me into Pete Sisco's schedule called Static Contraction Training (SCT). If you think that SuperSlow is good, you will not believe what SCT can do for you.

After a couple of months I only need to work out once per month. I do not waste time doing the mythical aerobic conditioning. It takes about one half hour to complete my session with a ten-minute warm up plus three exercises.

SCT has considerable advantages over SuperSlow. There is no full range of movement necessary, hence no opportunities for injuries. The stronger I get, the less frequently I work out. When I cannot be bothered getting any stronger, I am told that I can maintain my gains by working out every two to three months. Otherwise, I walk the dog for about thirty minutes daily. I still scuba dive, snorkel and kayak at times.

In August, 2008 I could leg press 300 kg (660 pounds). Last week I leg pressed 460 kg (1012 pounds). This is a static hold near full leg extension, not a full range of movement. In August, 2008, I could not quite lift a 40 kg (88 pounds) bar off the rack. Last week I lifted 80 kg (176 pounds).

The results speak for themselves. I feel stronger. My legs do not fail me at skiing the way they once did. I can now lift my 24-kg (52-pound) kayak onto the car roof without real effort. These results would be of no surprise to a SCT exerciser.

I will be seventy years old in a few months.

Neil Hilford
New Zealand

THE WARRIOR DIET

As someone who occasionally picks up a mainstream exercise and fitness magazine, I am struck by the absolute lack of nutritional knowledge of the so-called experts, who give advice about which fast-food entrée is best for “ripped abs” or “better biceps.”

As someone who has been trying to follow the WAPF diet for several years, I have noticed a lack of discussion about sports and weightlifting as they relate to those unique dietary needs. Although I was briefly exposed to Ori Hofmekler's *The Warrior Diet* several years ago through his association with one of the main promoters of kettlebell exercise in the country, it wasn't until last November that I read the book and his other books. I found him and his views very compelling and largely consistent with the nutritional guidelines of WAPF—not exact, but at least compatible.

That is why I was disappointed to read the book review of Ori's book in the Winter, 2008 edition of *Wise Traditions*. While Ori does not agree with every facet of WAPF philosophy, his book's recommendations are very compatible and should not receive a “thumbs down” judgment—in fact, a book review is not what was needed.

Instead, I would love to see WAPF engage with someone like Ori in a serious conversation about diet and sports. We've all seen the reports of what Michael Phelps eats—not exactly WAPF-approved. Compare that to Ori's recommendations of whole, organic foods; raw milk from grassfed cows; organic, free-range eggs; and fermented foods, to name a few.

In the very same issue of *Wise Traditions* you thank a reader for “a gentle reminder to the rest of us not to take our meal planning and food providing too seriously!” In that spirit, I would encourage you to retract your “thumbs down” review and instead start a conversation about all the common ground you share. What a benefit that would be to both *Warrior Diet* followers who could and should be a part of WAPF and WAPF members who want to learn more about functional exercise, intense training, and what I've found to be a very liberating and beneficial approach to how and when I eat each day.

Jason Isaak
Phoenix, Arizona

Many diet books contain guidelines that are somewhat in line with WAPF principles, but which miss the most important point, namely the need for liberal quantities of fat-soluble vitamins (vitamins A, D and K₂) in the diet. The Warrior Diet is a good example of such a book. Hofmekler recommends avoiding cod liver oil, puts no stress on organ meats, and provides recipes that are mostly low in fat but high in protein (one recipe calls for sixteen egg whites and three or four yolks!). As we have constantly stressed, such a high-protein diet is a recipe for burnout and chronic disease, whether the animal foods come from grass-based farms or not, especially if followed for too long. Here at WAPF we have an obligation to warn our readers about books that seem to be WAPF-friendly but which ultimately make recommendations that can lead to a broad range of health problems.

Letters

WAPF AND THE FITNESS COMMUNITY

I am a fitness person so am always looking at sites for fitness programs. Well, I think WAPF's message is getting into the fitness industry. One trainer, Mike Geary, has a nutritional program where he uses coconut oil, grass-fed beef, pasture-fed chickens and eggs, and raw milk. He quotes Dr. Mary Enig and has links to realmilk.com.

I thought this was awesome. He seems to be a voice of reason in an industry that needs one.

Joy Eriksen
Novato, California

As noted above, without the fat-soluble activators, the nutrients in grass-fed animal products largely go to waste. Physical activity uses up vitamin A, so athletes and those in training really do need to eat organ meats and take cod liver oil.

TRASH, OR SACRED FOOD?

This is a picture of a kahawai fish, which the mainstream *pakeha* (European) culture here regard as trash fish and the government sells by the ton to Australia for one dollar per kilo for cat food.

But the Maori regarded the kahawai as sacred fish; in the summer months when the kahawai are fat, they are the most highly regarded of all fish. They are prepared by removing all the organs, then, with the exception of the gall bladder, stuffing them back inside. The milt

and roe are also highly regarded.

In the photo under the fish is a stuffed stomach, to the right of that is an unstuffed stomach, then a male roe or milt, and underneath are two female roe sacks and the liver. All of that can be stuffed into one stomach. I haven't been able to eat them like that but put everything all in the fish stock and use it for fish sauce!

Smoked kahawai is fantastic as is



raw kahawai and every other way of cooking it, but it must be fresh! Down here over the past one hundred years it has been bottled to eat the following year. The fish is put into jars and into a large pot or bathtub with a fire underneath and then boiled for five hours. I don't know whether cooking that long affects the quality, but it still tastes very good!

Kay Baxter
Opotiki, New Zealand

SHARK LIVER OIL

I come from a fishing village on the coast of Peru. I remember working with my grandfather when I was young. He was a small man but very strong and healthy.

In addition to fishing, he had a small business selling shark liver oil to England. The liver of a shark is enormous! He would hang it up for several days, and then take it down and bake it. The oil ran out and he then bottled it and sent it to England.

Like my grandfather, we took that shark liver oil every day before the noon meal. We also ate lots of fish roe, which we understood gave fertility. The rest of our diet was seafood, with the addition of some potatoes and rice which were imported into the village—we grew nothing there, we only fished. My grandfather lived to age one hundred eighteen!

Pablo Cabalo
Alexandria, Virginia

ANTI-SATURATED FAT CAMPAIGN

A few years ago, my son and I had started a coconut oil company in the UK but we were practically hounded out of business by the UK Food Standards Agency (FSA), which did not like our concept and refused us any permission to say that coconut oil was healthy.

Now the FSA has launched an anti-saturated-fats campaign in the



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UK, and runs some very prominent and frightening TV ads. Here is some info on their campaign (www.food.gov.uk/news/pressreleases/2009/feb/launchsat-fatcampaign). The other day a journalist very encouragingly wrote something in the *Telegraph* about refusing to give up cream and butter. I think it is time that a few more voices were heard! I hope that WAPF members in the UK will write to the papers and inform them that the anti-saturated fat campaign is not based on science, but is driven by the agenda of the vegetable oil industry.

Sharon Maas
Eastbourne, UK

COCONUT OIL FORBIDDEN

I am currently living in the Canary Islands. A health food shop employee tells me that food grade coconut and palm oils are forbidden everywhere by the Spanish government because they are considered “bad for the heart.”

At the same time, soy products are flourishing like never before in the so-called “health shops,” and cigarettes are way cheaper here than on the continent!

What kind of world do we live in? I don’t know whether I should laugh or cry about it!

Laurent Langlais
Canary Islands

A MESSAGE FROM GERMANY

For two years now my family and I have been living according to the WAPF guidelines and it has made all the difference in health for us. I’ve read the book *Nutrition and Physical Degeneration* and it has been a revelation.

I live in southern Germany and the lowfat craze is big around here. What I read on your web site about the corrupt food and medical system is all the same here: supermarkets selling a lot of junk; people afraid to eat butter and eggs; vegetable oils everywhere; HFCS in all fruit and flavored yoghurts, puddings and ice creams in the supermarket. Now they even put vegetable oil into the ice creams instead of real cream. People buy the stuff anyway.

The government has gotten rid of most of the small farms by now; they couldn’t make a living anymore. There are a few left, but they are struggling. The organic farms are doing somewhat better. But the EU is subsidizing the big factory farms and the little ones are squeezed out. Raw milk is available if you get it directly from the farm. The farmer has to tell people by law to cook it before using it.

Elvira Uschold
Trevesen, Germany

THE RIGHT RATIO

Thank you for all your information on cod liver oil, vitamins A, D and the importance of the right ratio of A to D. I want to relate what happened with me when my A to D ratio became dismantled.

Last summer, after a period of job stress and an over-busy life, I got really sick with a viral throat infection that went into my thyroid gland. My thyroid hormones shot sky high with all the signs of extreme hyperthyroidism. I was in bed using a beta blocker for most of June but by mid-July I was recovering quickly. Because it took a

while to figure out what happened to me I was extremely nervous about doing too much of any supplement so lowered everything including cod liver oil.

My endocrinologist gave me the wise advice of waiting it out and by August I was back to feeling good again and my thyroid numbers were evening out. I had a general blood test and found out that my vitamin D was at a level currently considered low, around 30. I probably also had low vitamin A from the extreme viral infection during the summer. I got a shot of 100,000 IUs of vitamin D and lowered my intake of vitamin A from cod liver oil. That’s when all hell broke loose!

My thyroid numbers went hyper again, this time manifesting in hypothyroidism. My retina began to detach with peripheral flashing lights and floaters (this had begun towards the end of my summer illness and had been going away), and I developed multiple small warts under my breasts where the bra rubs and on my back—both of these are signs of vitamin A deficiency.

My arthritic ankle got so bad I bought a walking stick and figured my long put-off ankle fusion surgery was around the corner. I gained about 20 pounds fast and my ability to handle stress plummeted. Long extinct sinus problems returned with constant congestion at night.

No one had any answers and I figured my thyroid was damaged from the viral infection although my endocrinologist said he’d never seen that happen.

About two months ago I decided to try to pull my low ferritin [iron-storage protein] up to see if that would help, and



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began taking two to three heaping tablespoons of desiccated liver daily and lots of spleen tablets. Almost within days I changed totally. I thought it was the iron so after a month on this we retested and threw in a thyroid test for the heck of it. Amazingly my thyroid numbers were almost perfect. This was four weeks after my previous test showing super high numbers.

I still hadn't figured out that all this was due to vitamin A deficiency until I read Chris Masterjohn's article about the need for vitamin A to balance vitamin D. Now I suspect both my A and D were low after my illness. I would have slowly built up both in tandem on good foods, such as butter and cod liver oil. But once I got the high vitamin D shot it used up the remaining low vitamin A and my eye retina paid dearly.

Now I'm loading on early spring butter, fermented cod liver oil, fermented skate oil, liver and medicinal herbed bone broths. My warts have totally disappeared, sinus problems are going away, brain is working again, and the retinal problems are gone (which, by the way, my eye doctor said wouldn't happen and that I would have to get used to the flashing light).

Just after the vitamin D shot, when I took cod liver oil it gave me joint pain. However, now, with taking a lot of vitamin A, my osteoarthritis pain is also clearing quickly. I think I was not taking in enough vitamin A and the extra vitamin D in the cod liver oil, on top of the huge dose in the shot, was what caused the joint pain.

I've currently pulled my vitamin A

up to around 90,000 IUs (only from food sources) and will stay there for another month. I'll retest in a month but based on the way I feel I'm sure all will be good.

I suppose that most people probably have enough vitamin A stored in their liver so that the extra D supplements never push it to rock bottom. In the Third World, children don't lose their sight until the measles virus makes them hit the bottom. Everything I read says that vision problems happen when vitamin A is really, really low.

Another thought: People following the Marshall protocol are warned away from taking any vitamin D. I wonder whether these people are actually extremely deficient in vitamin A from viral infections. When they take vitamin D, it further depresses vitamin A.

Lynn Razaitis, Chapter Leader
Atlanta, Georgia

Thank you for sharing this fascinating story, which illustrates the danger of overdosing on vitamin D without also taking vitamin A. According to information in the Spring, 2009 journal, a vitamin D level of 30 should not be considered particularly low—normal is in the range of 30-50—so the shot of 100,000 IUs vitamin D was not even warranted.

LIFT THE BAN

I grew up on a farm in North Carolina. I and my eleven siblings were healthy and had very few colds or other health problems because we drank fresh milk every day. I am now eighty-one and

healthy and I give all the credit to fresh milk and other milk products we made on the farm.

During the Great Depression we gave many of these same products along with fresh eggs and produce to friends and family who lived in town. We were all healthy until the point where I and my friends no longer had access to fresh unadulterated products. Lift the ban on the fresh milk and we will have far fewer strange diseases.

Bill Parrish
North Carolina

RAW MILK AND THE EYES

I am just back from Illinois where I was unable to get raw milk. It was interesting to observe my body becoming full of phlegm, which went away after being back on raw milk.

I also noticed my vision deteriorating. I do not know what the connection is with raw milk and sharp eyes, but I stopped wearing reading glasses in my mid fifties, after switching to raw milk.

I wrote about my grandfather's farm in the Winter, 2007 *Wise Traditions* article, "The First Cow Share Program."

While back in Illinois sorting through boxes of family photos, I was repeatedly struck by the difference in the ones of my older sister, who was born on the farm and lived there until six months of age, and the other two suburban-raised children. Christina, the eldest, has a square face, a perfect bite, and rolls of baby fat. The two younger girls had oval faces and less fat. As we grew up, the eldest was the only one who



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did not need orthodontia. This is a small survey, but interesting.

I appreciated the article on cookware. Incidentally, the correct word for a spoon-fork combination tool is *runcible spoon*, coined by Edward Lear in his famous poem, “The Owl and the Pussycat.”

Neysa Garrett
Berkeley, California

RAW MILK FOR RASH

I sell organic raw milk from grass-fed, free-range Jersey cows to several women in my area. I had a new customer a few weeks ago started getting milk from me. Then one week she did not get milk and her daughter developed a rash around her mouth. This mother could not figure out what was going on with her child.

Then she got some milk from me again and the rash went away. What she discovered was that when she fed her child store bought milk, she developed a rash and when she fed her raw milk the rash went away. So this is proof that real milk really is the best!

Julie Rosen, Chapter Leader
Selby, South Dakota

OBVIOUSLY RAW MILK

My daughter has been purchasing raw milk for the past year from a small local dairy farmer. My ten-year-old grandson has suffered from a large range of allergies and slight asthma. This bothers him most in the winter and he has always stayed on Clariton. Since drinking raw milk he has been allergy-free, and medication-free as well. In

addition, his digestive system (previous gas problems) also is greatly improved. The addition of raw milk in his diet is the only change so it is obvious the raw milk is responsible for his improved health.

Vicki Wilson
Whitsett, North Carolina

VEGETABLE OIL IN CHAD

The January 5, 2009 issue of the *New Yorker* had an article about hardship in Chad, with a photograph of shanty structures made with cardboard boxes. Printed on the cardboard boxes was the following: “USA, Refined Vegetable Oil, Vitamin Fortified.”

I was so struck by this. Not that I hold the vegetable oil industry directly responsible for the crisis in Chad, Sudan or elsewhere, but the enormous implications of this agribusiness machine, of a world food supply gone mad, so devoid of meaning. . . it just hit me right in my heart.

It seems that we have forgotten the value of human beings, forgotten the value of precious real food, and of the joy and beauty of eating real food. Our society does not connect this with the suffering that ensues for so many and on so many levels when our fellow humans are deprived of that basic right to eat wholesome food. All because of the injustice of profits taking precedence over people.

Karen Phillips, RN, PHN
Monte Rio, California

CHUCKLING

My husband, age thirty-eight, had a

wellness exam for his insurance recently. He called me afterwards, chuckling. He said, “You’ve never seen a nutritional consultant’s eyes bug out like that.”

His numbers were fantastic. Cholesterol was 201, triglycerides were too low to read, and blood pressure and sugar were excellent. Following the exam he met with a nutritional consultant to discuss the results. She looked over his and happily asked how he stayed in such great shape. He proceeded to tell her how he eats bacon and eggs cooked in lard for breakfast, steak a few times a week, butter and raw whole milk. Dinner the night before was lamb steak with the fat. Needless to say, she was in shock. Of course, they were promoting lowfat, no-meat diets, and here was my husband, doing everything contrary and yet had what we figure were some of the best numbers in his group.

To her credit, she told him to keep doing what he’s doing. While we had no fear of his results, we were thrilled to see how good they were.

Misty Sorchevich
Cameron Arnold
Knox, Indiana



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Caustic Commentary

Sally Fallon and Mary Enig take on the Diet Dictocrats

RED MEAT VILLANY?

Red meat is under attack again, this time with a study published in the *Archives of Internal Medicine* (2009; 169(6):562-571), which made it to the front pages of the newspapers. “Eating red meat increases the chances of dying prematurely,” said the newspaper reports, “Americans who consumed about four ounces of red meat a day were more than 30 percent more likely to die during the 10 years they were followed, mostly from heart disease and cancer” (*Washington Post*, March 24, 2009). The report itself described the increases in total mortality as “modest,” and a careful reading of the text reveals that compared to those in the lowest quintile of meat consumption, those in the highest quintile were three times more likely to smoke, 50 percent less likely to engage in vigorous exercise, were less well educated, had lower fiber consumption and ate fewer fruits and vegetables. The authors did not explore the possibility that frequent meat eaters were more likely to eat processed vegetable oils and processed food in general. Chris Masterjohn points out that the study was not designed to determine cause and effect, and its ability to determine true meat intake was almost non-existent. “News reports and editorials alike failed to discuss its embarrassing finding that meat intake was associated with the risk of dying from accidental injury, probably because the apparent lack of a plausible mechanism by which eating meat could cause someone to get into a car accident emphasizes the most basic principle of science that they want us all to forget: that correlation does not prove causation. There are thus two important points we need to understand about this study to realize just how little it does to increase our knowledge: the study found a correlation between increased mortality and a population’s propensity to report eating meat, not a correlation between mortality and true meat intake. . . . these may be two completely different things; and correlation does not show causation. There is absolutely no scientific basis to conclude from this study that eating meat increases mortality” (www.cholesterol-and-health.com/cholesterol-blog.html). Meanwhile, an analysis of two hundred studies found no definitive association of meat and dairy consumption with heart health (*USA Today*, April 14, 2009). What did emerge from the review was a strong association with consumption of “starchy carbs like white bread and the *trans* fats in many cookies and french fries.”

DEADLY

Barely a month after the U.S. Department of Justice sued Forest Labs, maker of the popular and potentially suicide-inducing antidepressant Lexapro, for illegally marketing the drug for children when it wasn’t approved for use in children, the FDA has approved this highly dangerous drug for use in children. The Department of Justice lawsuit alleges that the company essentially bribed doctors to prescribe the drug to kids, so we can expect more of the same now that FDA has given Forest Labs the green light. FDA approval doesn’t make the risk go away. On the Forest Labs’ own Lexapro website, you’ll find this warning: “Antidepressants increased the risk compared to placebo of suicidal thinking and behavior (suicidality) in children, adolescents, and young adults in short-term studies of major depressive disorder (MDD) and other psychiatric disorders.” If your child is depressed, Lexapro could send him or her over the edge to suicide. If your doctor recommends this dangerous drug for your child, walk out of his office and find a new doctor immediately (www.hsibaltimore.com/2009/03/23/fda_children/).

VITAMIN A VINDICATED

Researchers at Tufts University have confirmed a theory first proposed by Chris Masterjohn (*Medical Hypotheses* December, 2007) that vitamin A protects against vitamin D-induced renal calcification (kidney stones) by normalizing the production of vitamin K-dependent proteins (*Journal of Nutrition* 2008 Dec;138(12):2337-41). The researchers showed that without vitamin A, vitamin D produces an excess of defective vitamin K-dependent proteins that will not protect against soft tissue calcification and may even cause soft tissue calcification. The study provides additional support for the premise that the fat-soluble vitamins A, D and K need to be concurrently present in the diet for optimal health. Vitamin A alone does nothing to benefit the kidneys or the lungs. Vitamin D alone causes a remarkable reduction in the ability of carcinogens associated with cigarette smoke to induce lung cancer but by itself causes kidney stones. When vitamin A is combined with vitamin D, lung cancer improves just as much, and the kidney calcification is completely eliminated. This may be because, as the research showed, the activation of normal vitamin K-dependent proteins in the kidney is much stronger with both vitamins than with neither, suggesting that

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vitamin A prevents vitamin D toxicity in the kidneys and that the two vitamins work synergistically to improve kidney health (www.cholesterol-and-health.com/cholesterol-blog.html). These studies underscore the importance of avoiding vitamin D supplements without supporting vitamin A, or of taking brands of cod liver oil that contain vitamin A but very little vitamin D.

HEALTHY OUTLIERS EAT LARD

In the 1950s, the residents of Rosetto, Pennsylvania baffled researchers with their exceptionally low rates of heart disease. In his new bestselling book *Outliers: The Story of Success*, author Malcolm Gladwell notes that those under fifty-five years old had almost no heart disease whatsoever and those over sixty-five suffered roughly only 50 percent as much heart disease as did average Americans. The experts looked at genetics, geography and so forth, yet nothing explained why the inhabitants of Rosetto were “outliers,” that is, statistical anomalies. They tended not to be magically thin, in fact were quite often obese. They didn’t exercise much either. Then the investigators looked at diet. People in Rosetto ate a lot of lard. They piled pepperoni, sausage, salami and sometimes eggs on their pizzas. And they ate lard. Over 40 percent of their caloric intake was from saturated fat. And they ate lard. Of course, good dieticians can’t even say the word “lard” without clutching their chests in pain. So they concluded with perfect political correctness that diet was not a factor either. Of course, those who have some scientific background in the subject of fat would know that in the U.S., from 1920 to 1960, heart disease skyrocketed while animal fat consumption (especially lard consumption) dropped equally drastically (USDA-HNI), not to mention many other studies which contradict the notion that animal fats cause heart dis-

ease. If the politically correct pundits understood that fact, they wouldn’t have to reach so deep into their barrel of lame explanations and pull out things like strong family and social ties. To the scientifically correct, there are no mysteries in Rosetto. Residents’ obesity was probably due to their lack of exercise and the sweet desserts they liked, but their hearts were strong because they consumed plenty of the ideal fuel for the heart—saturated fat.

VEGETABLES FLUNK AGAIN

Another study on vitamin K has found that vitamin K₂, the animal form of vitamin K, decreases the risk of heart disease. Vitamin K₁, the plant form of vitamin K, provided no benefit.

The findings emerged with an analysis of the Prospect-EPIC cohort, consisting of 16,057 post-menopausal women, aged between 49-70, none of whom had cardiovascular disease at the start of the study. Those who got their vitamin K by eating lots of green leafy vegetables did not fare better than the general population but those who got their vitamin K by eating the forbidden foods like egg yolks, cheese, animal fats and goose liver had substantially reduced incidence of cardiovascular disease (*Nutr Metab Cardiovasc Dis*. 2009 Feb 28, epub). Commenting on the research, Dr. Leon Schurgers



from the University of Maastricht said: “This study confirms our findings in the Rotterdam study, showing that increased vitamin K₂ strongly reduced the risk of coronary heart disease.” Unfortunately, the researchers can’t seem to wrap their heads around the fact that it is the fatty animal foods that protect us against heart disease. Instead they are calling for vitamin K supplementation. According to Gerrie-Cor Gast, lead author of the study, “Vitamin K₂ might be, for instance, more relevant in the form of a supplement or in lowfat dairy” (www.nutraingredients.com, February 12, 2009).

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BROWN FAT

Brown fat is a type of adipose tissue which has the sole purpose of expending energy. Biologists once thought that brown fat disappeared after infancy, but new studies show that most adults have unexpectedly large and active deposits of this calorie-burning fat. According to scientists, the only safe way to activate brown fat is to stay chilly, right on the verge of shivering, for prolonged periods. This causes the fat to use up calories to keep us warm. As expected, leaner people have more detectable brown fat than overweight people. Studies show that stimulating the production of brown fat in mice—which can be done by injecting them with a growth factor called BMP7—makes them resistant to gaining weight or to developing diabetes when fed a high-calorie diet (*Washington Post*, April 9, 2009). Naturally, scientists are looking for ways to increase brown fat in humans—by injection or pill—the typical reductionist mentality. What would be really interesting to know is what kind of nutritional support allows us to carry large amounts of brown fat from infancy into maturity, so that we know how to ensure that lucky condition of being able to eat lots of food but not gain weight.

SPIN DOCTORING

“Scientists studying a mysterious neurological affliction in cats have discovered a surprising ability of the central nervous system to repair itself and restore function.” Thus begins a *ScienceDaily* report (March 31, 2009), “Cats’ Central Nervous System Can Repair Itself And Restore Function,” on a study published in the *Proceedings of the National Academy of Science* (March 30, 2009). The report describes remyelination in cats recovering from a “severe neurological disorder” indicating “a profound ability of the central nervous system to repair itself.” It’s only well into the report that we learn more about the “mysterious neurological disorder” and the finding that should really have made headlines. The cats that developed this “mysterious” affliction had been fed irradiated food during pregnancy! Within three or four months, the irradiated food caused neurological dysfunction, movement disorders, vision loss and paralysis. “It’s a very puzzling demyelinating disease,” said Ian Duncan, the lead researcher. Cats put back on a normal diet recovered, but here’s the really important part: the recovery of the cats was not a rapid one, but slow, and the restored myelin in the sheaths was not as thick as healthy

myelin. In other words, irradiated food caused irreparable damage to the myelin sheaths. So much for spin-doctored headlines. What’s mysterious is how researchers could be so suborned by political correctness that they refrain from warning the public about the very real dangers of irradiated food uncovered in their research. “We think it is extremely unlikely that [irradiated food] could become a human health problem,” says Duncan. “We think it is species specific. It’s important to note these cats were fed a diet of irradiated food for a period of time.” Maybe they have been eating too much irradiated food!

NEW LOOK AT DIABETES

In the Spring, 2008 issue of *Wise Traditions*, Dr. Tom Cowan describes research showing the link between our immune system and our emotions. When we experience emotional pain, our immune system suffers, leading to immune dysfunction and autoimmune disease, and illnesses like cancer, Crohn’s disease and type 1 diabetes. The standard explanation for type 1 diabetes is malfunction and death of the insulin-producing islet cells in the pancreas. A recent study points to the model described by Dr. Cowan. Researchers Hans Michael Dosch and Michael Salter from the Hospital for Sick Children in Toronto have found that malfunction of the pain nerves surrounding cells in the pancreas can cause type 1 diabetes. Dorsch had observed in previous research that islet cells in diabetics were surrounded by an “enormous” number of pain nerves that signaled to the brain that pancreatic tissue was damaged. When Dosch and Salter injected capsaicin (hot red pepper extract) into mice with type 1 diabetes to kill the animals’ pancreatic pain nerves, the islet cells began producing insulin normally almost immediately. Further research uncovered the fact that the pancreatic nerve cells were a vital part of the functioning of islet cells, secreting neuropeptides that tell the islets to release insulin. When the researchers injected the neuropeptide into the pancreases of the diabetic mice, their islet inflammation rapidly cleared up and, again, their diabetes disappeared. Some mice have remained “cured” for up to four months with a single injection. The capsaicin-neuropeptide treatment also helped curb the insulin resistance that causes type 2 diabetes. Human trials are forthcoming (www.naturalnews.com/z021345.html). The real question is what causes the pancreatic neurons to malfunction in the first

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place? Several explanations come to mind: *trans* fats (which inhibit receptors and chemical reactions), lack of fat-soluble vitamins (needed for the production of neuropeptides), poor diet in general and childhood emotional trauma. While researchers will be looking for a magic, patentable fix, this research cries out for a truly holistic approach to diabetes.

CAFFEINE POISONING

Energy drinks like Red Bull, Monster, Rock Star and SoBE, and herbal supplements like guarana, are increasingly popular among young people. Increased consumption of these caffeine-containing beverages may explain the rise in emergency hospital trips for caffeine poisoning. When people indulge in caffeine at toxic levels, the amount found in two to three cups of coffee or more, they can experience anxiety, headaches, dehydration, tremors, heart palpitations and nausea. The problem of caffeine overload is particularly harmful to still-developing teenagers and people with heart conditions. More than half the calls made to poison control centers regarding caffeine over indulgence were made on behalf of young people under the age of nineteen. Regular sodas also contain caffeine—a visit to Starbucks, a soft drink, an energy drink, a bar of chocolate can all add up to a life-threatening jolt to the adrenal glands and a trip to the emergency room.

COINCIDENCE?

Property owners in Ireland who obtain their water from private water wells are at significant risk of infection from virulent *E. coli* O157:H7. Ireland's Health Protection Surveillance Centre reported five cases of kidney failure in children associated with the bug in 2007. The risk is much greater in rural than urban areas (www.independent.ie/health, April 14, 2009). Ireland is the European country with the greatest increase in confinement agriculture in recent years. Coincidence?

TAILGATING DANGERS

Trailing too closely behind trucks taking broiler chickens from factory farms to the slaughterhouse could expose motorists to antibiotic-resistant bacteria. Researchers from the Johns Hopkins Bloomberg School of Public Health took samples from cars that had driven two or three lengths behind flatbed trucks carrying open crates of conventionally raised caged chickens over a distance of seventeen miles and found increased levels

of disease-causing bacteria in air samples from the outside and the inside of the cars. The study was carried out on the Delmarva Peninsula, which has one of the highest densities of broiler chickens per acre in the country (*Washington Post*, December 1, 2008).

PORTENT OF THINGS TO COME?

Two recent agricultural calamities—one with corn and one with cows—have ominous implications for the future of the industrial agricultural model. In three South African provinces, farmers planting genetically modified corn have suffered up to eighty percent crop failures. Three varieties of genetically modified corn did not pollinate properly. According to Monsanto, producer of the corn, the problem was just a mistake in the laboratory—hard to believe when three different varieties of corn were affected (www.digitaljournal.com/article/270101). In Germany, a mysterious illness causing calves to bleed to death has veterinarians stumped. The two-to-three-week-old calves begin bleeding massively and are often dead within hours. Theories as to the cause include vaccinations, radiation from cell towers, decades of inbreeding and genetically modified soy in the feed (www.spiegel.de/international/germany/0,1518,615962,00.html). Desperate farmers are turning to prayer, but it might be better to just turn the cows out on grass. Are these two events harbingers of industrial agriculture's collapse? If so, the renaissance of small, pasture-based farms represents more than just a niche for yuppie consumers, but the difference between eating and starving. ☯☯

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.



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Low Metabolic Energy Therapies

Addressing Thyroid and Adrenal Insufficiency

By Bruce Rind, MD

Are you often tired or worn down? Do you have trouble sleeping? Do you have problems with your weight? Do you feel as though you're cold all the time and can't warm up? Do you have dry skin? Do you sometimes have difficulty remembering things? If the answer is "yes" to any of the above and you're thinking it's just something you have to live with, think again.

While all of the above seem like nothing more than day-to-day annoyances, in reality all are symptoms of low metabolic energy. The best way to eliminate these symptoms—and restore metabolic energy—is to correct the underlying problem. What causes low metabolic energy? The most common cause is poor thyroid function, poor adrenal function or, most commonly, a mixture of both. Another very frequent cause is hormonal imbalance—especially low progesterone or estrogen dominance in women or low testosterone in men. Restoring metabolic energy helps the body help itself, letting the self-repair mechanisms function well again and restore health.

When the body doesn't have enough energy to function properly, each component of the body will malfunction in its own unique way.

WHAT CAUSES LOW METABOLIC ENERGY?

Every process that goes on inside our bodies requires energy—specifically, metabolic energy. When the body doesn't have enough energy to function properly, each component of the body will malfunction in its own unique way. For example, if the brain has too little energy, thought processes such as memory and focus become impaired.

The body needs energy to keep itself warm; a low body temperature, therefore, usually accompanies low metabolic energy. (For more examples see the symptoms list, page 17.) In our cells, ready-to-use energy is present in the form of ATP (adenosine triphosphate) molecules. The body converts fats and carbohydrates into ATP that is then used for energy. However, there are other factors involved that can affect how well our body can make this conversion.

The thyroid gland, located at the base of the neck, makes the hormone T4 (thyroxine). T4 converts to T3 (triiodothyronine) and RT3 (reverse T3). It is T3 that turns on the ATP-making machinery inside each living cell, while the RT3 slows it down. Production of these thyroid hormones is controlled by TSH (thyroid stimulating hormone), which is released by the pituitary gland in the brain. The pituitary takes its orders from the hypothalamus (also part of the brain).

The adrenal glands, located on top of each kidney, help the body deal with stress. If metabolic activity is excessive, the adrenals perceive this as a stress. In response to this stress, the hypothalamus will signal the pituitary to produce less TSH, thus producing decreased T4 and thyroid activity. Based on the above explanation, some of the contributors to low metabolic energy are as follows:

1. The thyroid gland cannot make enough T4 (hypothyroidism).
2. The adrenal glands are too weak to handle the stress of the body's normal metabolic energy and force a down-regulation of energy production.
3. The enzymes (cellular machinery) which make ATP may be held back due to chemical interference from toxins, lack of needed ingredients (vitamins or minerals), or breakdown due to auto-immune disease or old viral damage.
4. Imbalance of hormones, such as growth hormone, testosterone, estrogen or progesterone.
5. Severe caloric restriction.

When one or a combination of these factors is in place, the symptoms of low metabolic energy, such as fatigue, weight issues, memory loss, cold hands and dry skin, may start to appear.

DIAGNOSING METABOLIC ENERGY PROBLEMS

To restore energy to a healthy level, the causative problem(s) must be corrected. Toxic exposure, nutritional deficiencies, food allergies (such as allergies to wheat), viral factors and auto-immune damage are all, to some degree, universal. If severe enough, any one of these factors (or a combination of several lesser ones) can overwhelm the body's metabolic mechanisms and become the cause of the problem.

The focus of this article, however, is low metabolism caused by adrenal or thyroid dysfunction, or a combination of the two.

Before going further, I wish to point out an observation I've made regarding the relationship of the thyroid gland to the adrenals. They

ABOUT THE AUTHOR

Bruce Rind, MD, is one of the leading holistic medical doctors in the Washington metropolitan area. He is certified by the American Board of Holistic Medicine and has been practicing holistic medicine since 1985. Dr. Rind started his medical career as an anesthesiologist. From there he moved into pain management and finally to holistic medicine.

He has developed expertise in areas of sports medicine, endocrinology (all hormonal concerns), repair of brain injury (especially after stroke) and women's health. Dr. Rind has taken additional training in a variety of alternative medical therapies. Dr. Rind's treatment approach is holistic. He completed his full osteopathic training for MDs at Michigan State University College of Osteopathic Medicine. He has completed a three-part British program of Cyriax techniques in orthopedic medicine. Further, Dr. Rind is an assistant professor at Howard University College of Medicine.

Visit his website at www.drrind.com.

seem to have an inverse relationship. How we appear (physically, emotionally and biochemically) seems to be a function of how the thyroid and adrenals relate to each other. Low adrenal function can appear like excessively high thyroid function—that is, sufferers of both may be thin and pale, nervous, have palpitations, and have unstable temperatures. By contrast, low thyroid function may have symptoms similar to high adrenal function—that is, sufferers of both may be heavier than normal, have a reddish facial complexion, have stable temperatures and a calm demeanor.

If poor thyroid function is the *only* cause of low metabolic function, we typically see a reddish complexion, thinning of the outer eyebrows, easy weight gain, depression, sluggishness, excessive sleep, high blood pressure and a decreased ability to fight infection. Conversely, if poor adrenal function is the *only* cause of low metabolic function, we typically see pallor, full eyebrows, difficulty gaining weight (if the problem is severe), difficulty losing weight (if the problem is moderate), anxiety, exaggerated

startle reflex, insomnia and unrefreshing sleep, low blood pressure, allergies and autoimmune problems.

Most people have a mixture of poor thyroid and poor adrenal function rather than purely one or the other, and therefore a mixture of symptoms. Within my practice I have developed several tools that assist in diagnosing the causative problem and facilitate treatment (see sidebar, page 18). They provide very useful feedback tools for proper diagnosis and treatment of low metabolic energy.

TREATMENT FOR LOW METABOLIC ENERGY

Where do we start, with the adrenal or the thyroid insufficiency? If *both* the thyroid and the adrenals are weak, adrenal repair must precede thyroid repair (see the Metabolic Scorecard™, page 20, to determine whether problem is adrenal, thyroid, or both).

If the adrenals are weak, then even normal thyroid activity places an excessive burden on them. One may begin to feel “hypoadrenal” (coldness, weight loss, dryness, fatigue, insomnia, and anxiety) and then the body innately turns down its own thyroid energy production by increasing production of RT3. Conversely, if the adrenals are strong and the thyroid is weak or unable to keep up with the adrenals, one begins to feel “hypothyroid” (heat intolerance, weight gain and fluid retention, tiredness, excessive need to sleep and depression). *A very common error made by medical practitioners is to focus entirely on the thyroid and ignore the adrenals.* In a weakened adrenal state, prescribing thyroid medication that contains

SYMPTOMS OF LOW METABOLIC ENERGY

Although many of the symptoms below seem unrelated, they may all stem from the same root problem of low metabolic energy.

GENERAL: Low body temperature. Coldness. Low energy or fatigue. Weight problems (can’t lose or gain it). Slow healing.

BRAIN: Depression and/or anxiety. Poor memory, focus or concentration. Sleep disorders.

IMMUNE SYSTEM: Under-reactive or over-reactive; that is, frequent infections (skin, sinus, bladder, bowel and yeast problems); allergies; auto-immune disease.

MUSCULOSKELETAL: Fatigue, fibromyalgia (muscle or joint pains); generalized aches and pains; repetitive use injury and carpal tunnel syndrome. Weak connective tissues (ligaments, bones, etc.); headaches.

SEXUAL: Loss of libido and function; menstrual disorders; infertility.

VASCULAR: Low blood pressure; high blood pressure; Raynaud’s disease.

BOWELS: Constipation; gas or bloating; digestive disorders; irritable bowel syndrome (IBS).

NERVOUS SYSTEM: Numbness of hands and/or feet (usually symmetrical); dulling or loss of senses such as vision, taste or smell.

SKIN: Dry; pallor in light skin, darkening or dark patches in dark skin; acne.

HAIR: Brittle, falling, coarse, dry or oily.

Another way of looking at this thyroid-adrenal relationship is to think of the thyroid as “generating” the energy while the adrenals need to be able to “handle” the energy.

T4 and/or T3 may produce limited or transient improvement. Subsequent increases of the dose offer little or no benefit as the medication pushes the energy machinery into overdrive. Unfortunately, this higher energy level is unsustainable due to the stress on the adrenals. Eventually the adrenals become fatigued and the symptoms of low energy return.

If, however, the adrenals are functioning well, the thyroid hormones can do their job and the result is good metabolic energy. Another way of looking at this thyroid-adrenal relationship is to think of the thyroid as “generating” the energy while the adrenals need to be able to “handle” the energy. If the thyroid-generated energy is excessive for the adrenals’ ability to handle it, the body will down-regulate the thyroid energy as much as it is capable of doing to accommodate what the adrenals can safely handle. Sometimes, in an effort to help the patient feel better, the physician keeps increasing the thyroid dose or even gives a T4-T3 combination like Armour Thyroid or just a T3 support like Cytomel.

The problem with this approach is that it forces the system to function at a higher energy than the adrenals can handle. Initially the adrenals have enough reserve to handle the higher thyroid energy so the patient feels better. When the (adrenal) reserves are exhausted (this can happen within a few days, weeks or months) the patient can develop fatigue, anxiety, bursts of rapid heart beat or the feeling of such bursts (palpitations) or other symptoms of either high thyroid function or of low adrenal function (see the Metabolic Scorecard™). This is the “crash and burn” phase of a thyroid treatment that

ignores the adrenals’ capacity to handle the thyroid support. It is often followed by a recommendation for an anti-anxiety or anti-depressant drug.

ADRENAL REPAIR BASICS

In general, stress hurts the adrenals. We can define stress as anything that challenges our survival, joy, prosperity, security or stability. It is anything that forces our system to adapt, such as change of circumstances, temperature extremes, changes in biochemistry (as in a sudden change of supplements, medication or even change of diet). Infection, lack of sleep or even lack of love are stressors. Mold is a common serious stress but difficult to avoid.

The opposite of stress, such as joy, adequate sleep and rest, comfort, peace, security, stability and good nutrition, are examples of factors that help the adrenals. So the obvious approach is to avoid the stressors and seek out those things that help.

As far as diet goes, it is important to eat more proteins and good fats (not vegetable oils) and to limit carbohydrates, especially sugars. Avoid stimulants and physiologically stressful substances such as caffeine, diet pills, chocolate, alcohol and cigarettes. If you have allergies, avoid the allergens; common allergens are wheat and dairy. Although this may sound surprising, we actually tend to crave foods to which we are allergic.

Metabolic activity (the chemical processes and changes going on in our body) represent a stress. At a level that can be handled by the adrenals, this stress is good for us—called eu-

USEFUL DIAGNOSTIC TOOLS

METABOLIC SCORECARD™: A method for looking at symptoms to provide guidance on whether there are adrenal, thyroid, or a mixture of problems. (See page 20.)

METABOLIC TEMPERATURE GRAPH™: A method for measuring and interpreting daily temperatures to gain insight into metabolic energy issues associated with both adrenal and thyroid function. (See page 21.)

THYROID SCALE™: A method of evaluating thyroid lab data (TSH, Free T4, and Free T3) relating them to optimal values as well as to one another. This provides a clearer picture of what is going on as opposed to the old, “Your lab values are all normal” response. (See page 23.)

ESTROGEN DOMINANCE QUESTIONNAIRE: A method of looking at symptoms to determine whether an estrogen/progesterone imbalance might be causing metabolic problems. (See www.drrind.com/therapies/edquestionnaire.pdf.)

stress—and maintains life. If metabolic activity is too strong for the adrenals, for example, from excessive thyroid stimulation, then the stress is bad for us—called distress—and wears the adrenals down.

Even “good stress,” such as celebration, can sometimes be excessive for the adrenals. Look for opportunities to experience security, joy and optimism. Learn to avoid negative emotions such as anger and fear (for example, horror movies). Increase rest; get as much sleep as possible and make the timing as regular as possible. Pushing too hard, excessive work or exercise and any sleep deprivation stresses the adrenals.

ADRENAL SUPPORT

Providing the body with proper support in the form of good nutrition is critical to repair. The minimal nutritional requirements for healthier adrenals are:

- A healthy whole food diet that is organic, contains an adequate amount of protein and healthy fat (oil is liquid in room temperature while fat is solid in room temperature) and adequate fat-soluble vitamins, while omitting anything you are allergic to, such as wheat, dairy or other specific foods.
- B-complex vitamins: A very complete B-complex with lots of vitamin B₅ (pantothenic acid) may be necessary. Remember that fermented foods are rich in B vitamins.
- Vitamin C and antioxidants: Vitamin C is

critical to adrenal function. The buffered powder form of vitamin C is often most easily tolerated as part of a drink sipped throughout the day. It is important to take bioflavonoids with vitamin C as these help recycle and sustain the antioxidant activity.

- Amino acids: Individuals with weak adrenals often cannot digest meat or proteins into amino acids very well. The adrenals thrive on amino acids. As with the vitamin C, amino acids are best taken as part of a drink sipped throughout the day.
- Healthy fats: Animal fat is the best source of healthy fat but it must be organic. If dairy or meat, the animal should, if possible, be grass-fed. Eggs are also healthy. Free-range hens are the best source. Cod liver oil provides vitamin A, essential for the production of adrenal and thyroid hormones.
- Unrefined sea salt: This helps the adrenals by raising low blood pressure and ensuring the body retains water. Plain table salt (sodium chloride) does not contain the same minerals and some people feel poorly when using it.

RESTORING THYROID FUNCTION

For mildly poor thyroid function, one can often get the needed support with supplements such as L-Tyrosine and iodine (for example, Prolamine Iodine from Standard Process) or a thyroid-supporting glandular supplement (for example, the product called T-100 Thyroid

Pushing too hard, excessive work or exercise and any sleep deprivation stresses the adrenals.

COMMON THYROID CONDITIONS

HASHIMOTO'S THYROIDITIS is a common autoimmune condition in which one develops an allergy to one's own thyroid gland. In the early phase, when there is destruction of thyroid gland and spillage of thyroid hormone (T4), there is a hyperthyroid effect. In an effort to lower the T4 level in the blood, the pituitary gland decreases the amount of TSH it secretes, producing low TSH values. The hyper-metabolic state that occurs usually stresses the adrenal glands and causes adrenal fatigue. When enough destruction has occurred and the thyroid gland can make only a small amount of T4, one goes into a hypothyroid phase. Now one has hypothyroidism and adrenal fatigue. Autoimmune antibodies, namely anti-thyroglobulin antibodies (ATA) and thyroid peroxidase antibodies (TPO), are almost always present on blood testing. The body can eventually counter the hyper-metabolic state by reducing the conversion of T4 to T3 (and increasing T4 to RT3 conversion). Thus metabolically, this is like stepping on the brakes in a car that's going too fast.

GRAVES' DISEASE is an autoimmune disease in which an antibody is produced that mimics TSH. It signals the thyroid gland to make T4. As the T4 level rises, the pituitary tries to reduce the T4 level by reducing TSH levels and we get a low TSH. Typically we find elevation of thyroid stimulating immunoglobulin or TSI. Most labs consider a level of 130 or higher as evidence of Graves' disease. In reality, we often see the signs of hyperthyroidism begin to appear in a subtle way at a level of 90. At 110 the symptoms are easier to see. By the time we get to 130, the symptoms are usually severe. Unlike Hashimoto's thyroiditis, in Graves' disease the T4 goes into high conversion to T3. This is like driving a car too fast and stepping on the accelerator. This condition is extremely stressful to the adrenal glands.

THE METABOLIC SCORE CARD™

Are my metabolic energy problems due to low adrenal or low thyroid function? The Metabolic Scorecard™ provides valuable insight as to whether low thyroid and/or adrenal function may be the cause of your signs and symptoms.

Below is a sampling of items from the Metabolic Scorecard™. This will tell you if your condition is predominantly low function of thyroid, adrenals, or a mixture of both. Nobody has all the symptoms; however, the more severe the problem the greater the number of symptoms will be present. For the full chart with extensive notes, go to <http://www.drrind.com/therapies/metabolic-symptoms-matrix>.

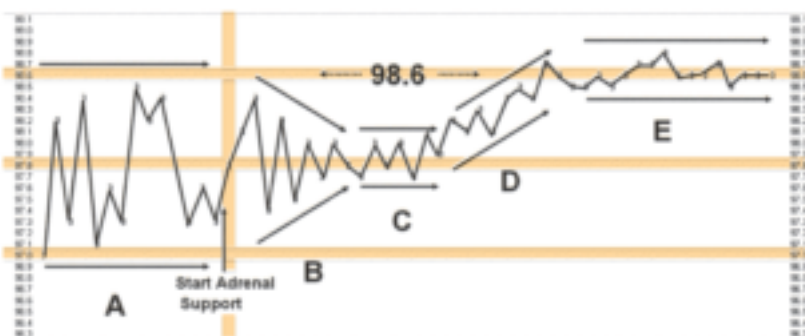
SIGNS & SYMPTOMS	ADRENAL	MIXED	THYROID
Body Type	Mild: Gains weight easily Moderate: Can't lose weight Severe: Thin, can't gain weight	Gains easily, goes to tum-my/hips first, very hard to lose	Weight gain, generalized or global, extremely hard to lose
Eyebrows	Tend to be full	Normal to sparse	Very sparse outer 1/3 to 1/2
Facial Coloring	Tendency to pallor, especially around the mouth. In dark skin, it darkens around mouth, forehead, sides of face	Pallor around mouth (more visible with light skin)	Ruddy or rosy complexion, including around the mouth
Pigment Distribution	Vitiligo (white spots or patches) in late stage. May tan too easily. In dark skin, darker on forehead, sides of face, around mouth and chin/jaw	Milder version of vitiligo and dark patches if dark skin	In pure hypothyroidism, vitiligo and hyperpigmentation are very rare
Light Sensitivity	++	+	-
Temperature Pattern	Poor thermoregulation (hot when it's warm, cold when it's cool). Tends to low body temperatures, 97.8 or lower. Fluctuating pattern	Fluctuating pattern, usually averaging 97.8 but can be lower	Stable, non-fluctuating patterns, average can be from low 90s to a little below 98.6
Emotional Reactivity	Hyper-reactive (over)	Moderate	Hypo-reactive (under)
Intuitive	++	+	+/-
Depression	+	++	+++
Dietary Habits	Often leans towards vegetarianism, or avoids certain foods	Fewer dietary restrictions than pure adrenal type	Tends to eat everything
Bowel Function	Tendency to be irritable or hyperactive, transit time may be too fast, causing poor digestion	Poor/mixed	Tendency to constipation, slow transit time and poor mechanical digestion
Cravings	Sweets, carbohydrates, salt, black licorice	Mixed	Fats
Blood Sugar	Tendency to hypoglycemia. May need many small meals or crash	Can range from mild hypoglycemia to hyperglycemia	Normal to hyperglycemia
Blood Type	Most are type A		Often type O

METABOLIC TEMPERATURE GRAPH™

If you suspect thyroid or adrenal insufficiency, the first step is to take your temperature. Not to determine whether you've got a fever; rather, temperatures reflect an individual's metabolic energy state.

The average daytime temperature of a healthy individual is 98.6, thus making 98.6 the optimal (as opposed to normal) temperature. Lower-than-optimal temperatures reflect a lower-than-optimal metabolic state, which is usually controlled by the thyroid mechanism. Wide variability of temperature reflects an unstable or fatigued adrenal system. Thus, on the road to health, one wants to go from low and/or unstable temperatures to 98.6 and stable temperature.

The Metabolic Temperature Graph™ is an extremely valuable feedback tool that provides a roadmap with which one can see whether one is moving toward or away from a healthy metabolic state. It provides insight as to whether or not the therapeutic efforts are working. This feedback helps guide the treatment program on a daily basis. Once corrective actions are underway, the temperature pattern will show you how your health is progressing.



TEMPERATURE PATTERNS IN RESPONSE TO ADRENAL THERAPY

Adrenal fatigue is characterized by unstable temperatures (A). Core temperatures have wide variations. They tend to rise in warm weather and fall in cold weather. With adrenal support, adrenal function improves and variability decreases, that is, temperatures become more stable (B). They may stabilize in the low range (C) and then rise as improvement continues (D). The goal

is stable temperature in the optimal range (E), typical of a healthy metabolic state.

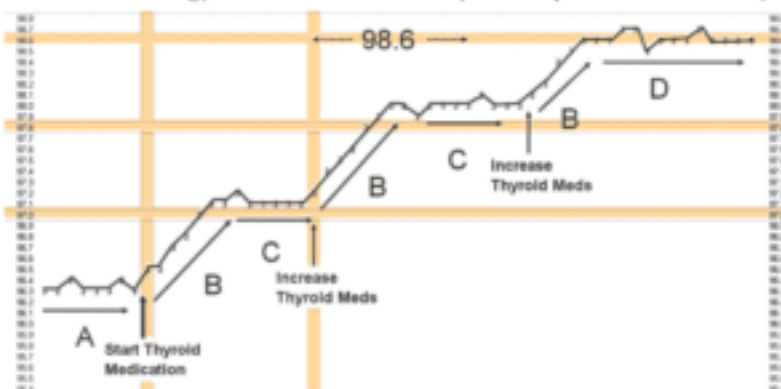
If the adrenal support is working well, phases A through D can each last from one week to several months, depending on the individual. In any given individual each of the phases seems to last approximately the same length of time, some going through each period quickly, and others taking more time to go through each phase. Some phases can blend together. For example, A and D can combine into an upwardly stabilizing pattern without C being present. I have actually seen some people go directly from A to E. To go from A to E can take as little as one to two weeks or as long as a few months. The goal is for phase E to be permanent. If the adrenal fatigue is more severe (usually of longer duration), each of phases A through D tends to last longer and phase E tends to be less secure. If no progress is seen within several months, there is usually another problem present, such as toxicity or nutrient deficiencies.

TEMPERATURE PATTERNS IN RESPONSE TO THYROID THERAPY

Below is a typical temperature pattern found in a person receiving proper thyroid support, having an average to good response. When there are only problems with the thyroid gland, the straight-line pattern is amazingly consistent.

The typical patient with poor thyroid functions has a stable but low temperature that reflects lower than optimal thyroid activity (A). After starting or increasing the dose of thyroid hormone replacement medication, the temperature steadily rises (B). The temperatures plateau at the metabolic level reflecting the current dosage of thyroid replacement medication (C). Eventually when the proper dose of thyroid replacement medication is reached, the temperature is stable at 98.6 (D). If the adrenals cannot handle this level of energy, we tend to see an expansion pattern followed by a drop in temperature.

The Metabolic Temperature Graph™ is a powerful tool that graphically depicts our metabolic state (adrenal and thyroid) and guides us on the path to recovery. It lets us know if a therapy is helping or hurting us and by how much. As your adrenals and thyroid receive the needed support, monitoring your own progress with this tool will multiply the benefits. For details on how to take your temperature and record them in graph form, visit www.drind.com/therapies/metabolic-temperature-graph.



THYROID BASICS

The thyroid gland is located at the base of the neck and makes thyroxine (thyroid hormone or T4) which signals the cells to make energy.

The adrenal glands are located on top of the kidneys, they make many hormones (cortisol, DHEA etc.). Their main function is to help us deal with stress or help us survive. They help maintain stability of many bodily functions (physical, emotional, thermal, hormonal etc.). When there is stress—anything physical, chemical, emotional, nutritional or lifestyle such as sleep patterns, which causes us to have to adapt—the adrenals need to work. Excessive stress can exhaust them. One often overlooked adrenal stressor is thyroid energy in excess of what the adrenals can handle.

The pituitary gland is situated at the base of the brain (above the roof of the mouth). It sends out instructions to many glands, including the thyroid gland, telling them how much hormone to produce. One such hormone is TSH (Thyroid Stimulating Hormone) which signals to the thyroid gland to make thyroid hormone. The pituitary gland determines how much TSH to secrete (that is, how much thyroid hormone to tell the thyroid gland to make) based on (1) how much thyroid hormone is available; (2) how much thyroid hormone the body needs; and (3) how much thyroid hormone the body (actually the adrenals) can tolerate.

Thus a high TSH level is the pituitary gland's way of saying that it has a high need for thyroid hormone or that the body can tolerate more thyroid energy than it is getting, and it is meant to generate more thyroid hormone production. Conversely, a low TSH reflects either a low need or desire for thyroid hormone or a low tolerance for the thyroid hormone, and it is meant to reduce thyroid hormone production. An optimal value of TSH means the thyroid hormone levels match the body's energy needs and/or ability to utilize the energy.

The thyroid gland makes a hormone called T4 (thyroxine). T4 will become T3 (triiodothyronine) which causes energy (in the form of ATP) to be made in each living cell. T4 can also become reverse T3 (RT3) which interferes with the energy production in the cell. Just as a car needs an accelerator and brakes for proper function, the same is true for the body. The body needs T3 (the accelerator) and RT3 (the brake) to manage its energy needs.

To summarize, T4 has four iodine atoms and it is a pro-hormone, that is, it lives to become either T3 or RT3. When the body needs energy, it removes an iodine atom from the T4 and turns it into T3, which in turn signals living cells to make energy (ATP). T3 allows the body to turn up the energy when it needs to. Reverse T3 (RT3) is made by the body to tone down energy. It is made by removing a different iodine from T4. Like placing a bad key in the ignition, it blocks the T3 (the working key) from signaling the cell to make energy. It allows the body to turn down the energy when it needs to. Rather than looking at the values as low-normal-high, we can make more sense of the data if we look at each value as it relates to the optimal value. In my practice, I have found the following to correspond to the healthiest segment of the population and which I do not find to be associated with symptoms of thyroid excess or deficiency. First, a word on thyroid tests.

Thyroid hormones (T4, T3, and RT3), once released into the bloodstream, exist either as protein-bound or in a free form. Protein acts as a sponge or reservoir to which hormones bind and then can be freed. Hormone in free form is available to interact with a cell's receptor site to produce its hormonal effect. It is only the free form hormone that is biologically available or active. When the hormone is bound to a protein it is restrained from interacting with a cell's receptor site.

I typically test for the following: free T3, free T4 and TSH. If there is a suspicion of Hashimoto's thyroiditis, I include a thyroid peroxidase antibody test (TPO) and an antithyroid antibody test (ATA). I also use this to monitor the severity of the Hashimoto's thyroiditis and to see whether therapy is working. If there is suspicion of Graves' disease, I include TSI. Based on my observation of nearly 5,000 patients and the lab test values that my healthiest patients tended to have, I believe the optimal values for these tests, within a 5-10 percent margin of error, are as follows:

TEST	LAB LOW	OPTIMAL RANGE	LAB HIGH
TSH	0.5	1.3-1.8	5.0
Free T4	0.8	1.2-1.3	1.8
Free T3*	230 (2.3)	320-330 (3.2-3.3)	420 (4.2)

*Some labs divide FT3 results by 100 thus 230 is the same as 2.3, etc.

In the cases of Free T4 (FT4) and Free T3 (FT3), the optimal zone is roughly half way between the usual lab normal low-high values. In the case of TSH, the optimal zone is skewed far toward the low end of the standard lab Low-High range. For further details, visit www.drrind.com/therapies/thyroid-scale.

THYROID SCALE INTERPRETATION MATRIX

The Thyroid Scale Interpretation Matrix can be an extremely useful tool, especially when combined with the Metabolic Scorecard™ and the Metabolic Temperature Graph™ (pages 20-21). For more details, visit www.drrind.com/therapies/thyroid-scale-matrix.

STATE OF HEALTH	TSH	T4	T3	TEMPERATURE PATTERN	COMMENTARY
Healthy	Optimal	Optimal	Optimal	98.6, stable	
Adrenal Fatigue	Low	Low	Low	Low, average is typically 97.8 or lower. Very unstable	Symptoms: Predominate in adrenal column. Often confused with hypothyroidism because of low T4 and T3. Some doctors mistakenly interpret the low TSH here to mean pituitary trouble
Estrogen Dominance (ED)	Low	Low	Low	Low, average is typically 97.8 or lower and unstable	Is the same as adrenal fatigue in that they are related to each other. In adrenal fatigue, the adrenals often sequester the progesterone to help make cortisol. The drop in progesterone creates the progesterone-estrogen imbalance called ED.
Hypothyroidism due to low thyroid function as a primary cause (such as surgical removal of thyroid with insufficient replacement of T4)	High	Low	Low but to the right of T4	Low and very stable	Note there is high conversion of T4 to T3. There is a high demand for T4/T3 (high TSH) and the body is extracting as much T3 out of the T4 as it can.
Hypothyroidism due to low pituitary function	Low	Low	Low but to the right of T4	Low and very stable	Looks just like primary hypothyroidism but TSH is low. We know there is demand because of high conversion of T4 to T3 but the TSH doesn't rise to help T4 production.
Late Hashimoto's thyroiditis or hypothyroid and adrenal fatigue	Optimal to high	Low	Low and mildly to the right of T4	Low and unstable	The most common presentation of disease. Similar to adrenal fatigue but symptoms are predominantly in the mixed column.
Early Hashimoto's thyroiditis	Very low	High	High but to the left of T4	Can range from below 98.6 to slightly above	The body can slow down metabolism (step on the brakes) by shifting conversion of T4 toward RT3 and away from T3. Thus we see T3 is to the left of T4.
Graves' disease	Very low	Very high	Very high and to the right of T4	Tends to be above 98.6 and stable in the early phase. Later, drops below 98.6 and becomes unstable.	T3 to the right of T4 (that is, high conversion of T4 to T3) is like a car that's speeding out of control and the driver steps on the accelerator. This is typical for Graves' disease.
Poorly effective thyroid hormone	Mildly high	High	Optimal and to the right of T4	Low and moderately stable	Can be due to nutrient deficiency, viral damage to mitochondria, toxic burden, or poor receptor site (to thyroid hormone) sensitivity.
Chronic infection	Optimal to mildly high	Optimal to mildly high	Optimal to mildly high	Mildly above 98.6	Source of infection may be elsewhere.
On thyroid support that contains T3: <ul style="list-style-type: none"> Desiccated thyroid such as Armour thyroid T4/T3 mixture such as Thyrolar Slow release T3 (compounded) Pure fast release T3, such as Cytomel 	Optimal if dose is proper High if dose is too low Low if dose is too high	If the TSH is optimal, the T4 will be low	If the TSH is optimal, the T3 is high	Often unstable. Tends to be less unstable with Armour and most unstable with fast release T3 (Listed in the first column in order of increasing destabilizing effect on the temperature pattern.)	The body seems to do better with a steady state of energy. T4 acts slowly but T3 is rapid to come and leave. Therefore, to maintain a steadier blood level of T3, it is best taken in divided doses. Splitting the daily dose into 2 or 3 portions stresses the adrenals less than taking the entire dose once daily and therefore leads to more stable temperatures.

Glandular Support). Supplements containing mixtures of thyroid nutrients are also available. Some thyroid glandulars may offer more complete support.

If the thyroid condition is more severe, one may require prescription medication. Giving only T4 (such as Levothyroxine, Synthroid, Unithroid, and Levoxyl) is a good choice if T4 is the only missing component. In individuals with poor conversion of T4 to T3, a desiccated thyroid preparation (such as Armour Thyroid Rx) often works best because it contains the needed T3 as well. Breaking up the dose into two or three doses daily provides a more stable blood level of T3 and generally produces better results. Taking the daily dose all at once in the morning tends to be stressful on the adrenals and often leaves one feeling depleted by afternoon. Evidence of this fact can be seen when taking daily temperatures. The adrenal stress shows up as increased temperature volatility.

Note that if the adrenals are too weak to handle the desiccated thyroid, then we often see an initial response of better energy and fewer symptoms, followed by a later crash in which energy can drop to even lower levels than before the desiccated thyroid support. Additionally, other symptoms of adrenal stress such as anxiety, insomnia and palpitations (racing heart) can then occur. The same can be seen with fast release T3 (such as Cytomel) or with slow release T3.

ESTROGEN DOMINANCE SUPPORT (FOR WOMEN)

Estrogen is generally a stimulant and estrogen dominance presents as anxiety, agitation, muscle tension and increased cell division in female organs, leading to uterine fibroids and breast cysts. Conversely, progesterone has a calming effect, including sedation and slowed cell division. An imbalance that favors a predominance of the estrogenic effect (either excessive estrogen or insufficient progesterone) is called estrogen dominance. (See sidebar, page 25.)

METABOLIC THERAPY™ HEALING

As you can see, low metabolic energy can appear as any of numerous symptoms. The best way to eliminate the symptoms is to correct the underlying problem—in most cases, poor thyroid and adrenal function. Once you've made the choice to correct the problem, some general principles of treatment apply:

- If the treatment is working, one should feel improvement as time goes on. Healing crises rarely occur with thyroid and adrenal repair. They tend to occur more often with detoxification or elimination of a biological agent.
- Successful treatment is achieved more easily through the use of feedback based on changing signs, symptoms, temperature patterns and lab values.
- When taking supplements, especially for those who are highly sensitive or have allergies, the old nursing adage of “start low, go slow” is very important to remember when restoring adrenal and thyroid function.

It is the adrenal component that is least understood or appreciated. Yet both thyroid and adrenal function can be enhanced using good nutrition, lifestyle changes and, in some cases, supplements and thyroid medications. These can help you start living a normal, symptom-free life.



KEVIN BROWN SPEAKS AT MISSISSAUGA, ONTARIO CHAPTER MEETING

Lori Ryan, Mississauga, Ontario, Canada WAPF chapter member with Liz Pitfield with Kevin Brown, Palmyra, New Jersey chapter leader (with his wife Tracy), and author of *The Liberation Diet* (see review, page 75) at a WAPF potluck held in Lori's home. Participants enjoyed home-prepared nutrient-dense food, raw Guernsey milk and raw spring butter.

THE ESTROGEN DOMINANCE-ADRENAL FATIGUE CONNECTION

Adrenal fatigue and estrogen dominance (ED) are very similar in their symptom presentation and share a lot in common. Most women who have one tend to have the other to some degree. Estrogen dominance and adrenal fatigue have the following relationship:

- Progesterone is transformed into cortisol as well as into other hormones.
- Most ED is due to insufficient progesterone and therefore accompanies low cortisol production.
- Most adrenal fatigue involves an inability to keep up with cortisol production.
- When the adrenals are stressed, the increased need for cortisol depletes the progesterone levels used in making cortisol. As more progesterone is shunted or sequestered to make cortisol, less is available to balance the estrogen.
- Another common reason for low progesterone levels is an anovulatory cycle (a menstrual cycle in which there is no ovulation). Without the ovulation there is no corpus luteum to make additional progesterone for the cycle. The lowered progesterone level leaves us with an excessive estrogenic effect due to deficiency of progesterone.

In summary, fixing adrenal function and estrogen dominance go hand-in-hand and it is therefore difficult to fix one while ignoring the other. ED can also be caused by excessive estrogenic stimulation. Typical sources of estrogenic effect are:

- Excessive fatty tissue: Fat cells make estrogen and estrogen causes fatty tissue growth. This is a vicious cycle we'd like to avoid.
- Hormone replacement with non-bio-identical hormones such as estrogens from horses or chemically modified estrogens. These have very potent estrogenic effects. This is especially problematic if there is no (calming) progesterone given at the same time to balance the (excitatory) estrogen. Unopposed estrogen is a powerful cause of ED. Synthetic or non-bio-identical estrogens would more appropriately be called estrogenoids (substances that have an effect similar to estrogen) as they are not truly the estrogen our body makes. Progestins are often given along with synthetic estrogens. These are chemical substances whose effects are similar to progesterone but act differently from progesterone because they are chemically different. Our bodies cannot convert the progestins into cortisol to help the adrenals or convert them into any other hormonal compounds as we could with bio-identical progesterone.
- Exposure to chemicals that mimic estrogen such as many plastics (e.g., microwaving food in plastic dishes or using plastic wraps and containers) or from eating soy products or non-organic food. Feedlot livestock are typically given potent estrogenic substances ("super-estrogens") to make them more productive. Our produce is often laced with these substances and soy foods are very high in estrogen-like compounds.

Correcting ED involves more than just correcting the estrogen-progesterone balance and supporting the adrenals. It is important to eliminate the causative factors as much as possible. Excessive exercise, insufficient sleep, toxic exposure, poor nutrition (high intake of carbohydrates, low intake of fat and protein, low intake of nutrients), and stress are some common causes

Direct help to the adrenals indirectly helps improve the ED (estrogen-progesterone balance) by allowing more progesterone to be available to offset the estrogen. Direct help to the estrogen-progesterone balance indirectly supports the adrenals by making more progesterone available for cortisol production. In addition, progesterone itself has a toning-down, calming and sleep-supporting effect which further helps stressed adrenals.

If we want a very gentle support for progesterone production we can try the herb chaste tree (1-2 tablets early each morning upon waking). This is typically helpful for menstruating women with estrogen dominance. Herbalists often use this to help produce more regular ovulation and subsequently improve progesterone production. The herb is often helpful in relieving menopausal symptoms (hot flashes) when taken in combination with black cohosh.

I find that the easiest way to restore balance to estrogen dominance is with progesterone. I've developed a progesterone protocol for doing this which helps most of my patients. There are always some who might respond poorly for which corrections need to be made. That is why it is always advisable to work with a physician who is familiar with the use of natural hormones while trying to restore a physiological hormonal balance.

It is important to note that there are different ways to take progesterone and these affect patients differently. Dosage is also an important factor. As with any hormone, optimal dosage is the key. Too much or too little will either not produce the desired result or actually produce an undesirable result. This is an important consideration when post menopausal women use progesterone for the first time. The progesterone will temporarily increase the body's sensitivity to estrogen (estrogen receptors temporarily become more sensitive to estrogen) thus producing a temporary increase in estrogenic effects. This can produce a temporary worsening of symptoms. To minimize this effect, progesterone needs to be started at a very small dose that is increased slowly to full dose over 2-4 weeks.

Best Kept Secret

A Successful Approach to Underactive Thyroid Hormone Function

by John Dommisse, MD

There is widespread dissatisfaction and frustration among people with underactive thyroid hormone function: The majority of them feel that their condition has been missed or that the treatment they are receiving has never really restored that function to normal or gotten their lives back to what they were before they became hypothyroid.^{2,3,4,5,6} This occurs despite the fact that the endocrinologists and thyroidologists who drive the teaching and treatment of this condition are intelligent people with many years of education and training in medicine, thyroid hormone function and the treatment of thyroid diseases.⁷

They even admit that this tragic situation exists but are, for various reasons, unable to re-think their approach sufficiently to effect the necessary changes in patient outcomes. We will try to ascertain what some of those reasons are and show that hypothyroidism *can* be treated satisfactorily, but the protocol is a well kept secret. This is a tragic situation because thyroid hormone function is extremely important for the metabolism of every cell in the body, including the brain, and people in whom this function is low suffer myriad possible negative consequences.

These include elevated cholesterol¹⁴ and homocysteine levels and increased incidence of heart attacks,²⁴ strokes, and peripheral vascular disease. Other adverse effects include infertility and miscarriages; low sex drive; impotence and erectile dysfunction;^{25,26} high blood pressure; physical and mental fatigue, sluggishness and apathy; lack of ambition and drive; abnormal weight gain and obesity; very dry skin, brittle nails and hair loss; constipation, often severe, with impaction; depression and mood swings; anxiety, memory loss, dementia and “Alzheimer’s”; cold-intolerance; insomnia; increased susceptibility to infections and possibly cancer, especially breast cancer; muscle and joint pains; digestive problems; increased allergies and rashes; personality issues; even lack of leadership ability.

The biggest losers in this neglectful situation are cardiovascular, infertile, elderly, memory-loss, mood-disordered, chronically fatigued, insomniac and overweight patients.

An indication of the level to which hypothyroidism is underdiagnosed and undertreated, is revealed by the fact that I have never had to prescribe a statin drug to normalize anyone’s cholesterol, triglyceride or other lipid blood levels. I am treating them not with another drug, but with what they really need: optimal blood levels of the thyroid hormone(s) which they are lacking!

THE BASICS OF THYROID PHYSIOLOGY⁷

The thyroid gland is a butterfly-shaped gland that straddles the front of the windpipe and voice-box and that can be palpated (felt) with the fingers, especially if it is enlarged or has nodules or tumors in it. It secretes two main

thyroid hormones into the blood stream, all the available L-Thyroxine (T4) and about 10 percent of the necessary Tri-Iodo-Thyronine or Lio-Thyronine (T3). These are manufactured in the gland from one molecule of the amino acid tyrosine and iodine—four iodine atoms per tyrosine molecule in the case of T4, and three iodine atoms in the case of T3.

Several minerals and other nutrients are also involved, in a supportive way, in the manufacture of these two thyroid hormones, so it pays to optimize their blood levels as well. These are iodine, of course, along with selenium, zinc and magnesium. Vitamin A is essential for production of thyroid hormone. Mercury, chlorine/chloride, fluorine/fluoride, perchlorate toxicity and excess copper—and even normal therapeutic levels of the mineral lithium—are known to decrease T4 and, especially, T3 levels. Therefore, the physician should do a blood test for these levels if there is any suspicion that these levels may be elevated (such as many silver fillings or high deep-sea fish consumption in the case of mercury; or living in a home with copper plumbing and no water-filtration system in the case of copper). Even certain foods such as soy and cabbage can reduce thyroid function. It seems that genetically modified soy is especially goitrogenic.

Only T3 is really active as thyroid hormone, T4 being a pre-hormone or pro-hormone which has to be converted, that is, de-iodinated to form the remaining necessary T3 in the tissues and cells before thyroid function can ensue. Brain cells may initially need to receive a good proportion of their supplies of thyroid hormones in the form of T4, before it is converted to T3 inside the cells of the brain, spinal cord and peripheral

Only T3 is really active as thyroid hormone.

ABOUT THE AUTHOR

John Dommissie, MD, MBChB (CapeTown), FRCP (Canada) of Tucson, Arizona, is an expert in thyroid disorders, as well as in vitamin B₁₂ therapy. This article is based on a recent paper published in the “Hypotheses” section of *Thyroid Science* (3(2):H1-14, 2008).¹ Dr. Dommissie has successfully used the approach outlined in this article in over 5,000 patients since 1989.

Earlier this year, his state medical board revoked his allopathic medical license (which he is appealing) in spite of his accomplishments in the field of hypothyroidism diagnosis and treatment. None of his treatments has ever harmed any patient and he achieves superior results to that of most physicians.

Dr. Dommissie has managed to remain in a consulting practice to in-person and out-of-state phone-appointment clients by utilizing a novel federal legal structure, based on the First and Fourth Amendments of the Constitution, which has consistently been upheld when challenged, for similar usages, in the U.S. Supreme Court. Visit his website at www.JohnDommissieMD.com or contact him at john@johndommissie.com, (520) 577-1940.

nerves, partly because T4 passes more readily through the choroid plexus (the “blood-brain barrier”) into the cerebrospinal fluid. But most T3 is present in the blood stream. The level of free or unbound T3—meaning unbound to serum proteins—by the accurate tracer-dialysis-method blood test, corresponds well to its function inside the tissues and cells of the body and brain.²

When the thyroid gland does not produce enough thyroid hormones (mostly T4, and some T3), a feedback mechanism in the pituitary gland (situated in a bony cage at the base of the skull) comes into play. This causes the pituitary gland to secrete increasing amounts of thyroid stimulating hormone (TSH or thyrotropin), which, as its name implies, stimulates the thyroid gland to produce more T4 and T3 hormones. There is

also another endocrine organ, the hypothalamus, in the base of the brain, immediately above the pituitary gland, which can either stimulate or suppress the function of the pituitary gland in relation to thyroid function by the increased or decreased action of its thyrotropin-releasing hormone (TRH).

When all these types of hypothyroidism (thyroid underactivity) are taken into account (see sidebar below), my estimation is that 20 percent of the adult U.S. population suffers from some degree of hypothyroidism. This prevalence increases after middle age and into old age.

In practice, any combination of two or more of these types of hypothyroidism can occur simultaneously, confusing the diagnosis and the perception of the degree of hypothyroidism significantly. There does not need to be a known pathology in any of these glands or body tissues for the *function* of that gland or hormone to be compromised and leave the patient with the “bottom line” of low thyroid hormone function, as indicated by a low serum free-T3 level (especially when measured by the tracer-dialysis method, the only consistently accurate method). Much too

THE TYPES OF HYPOTHYROIDISM⁷

PRIMARY HYPOTHYROIDISM: This occurs when the primary problem is in the thyroid gland itself, which does not produce sufficient T4 and T3 to drive the metabolism of the cells of the body and brain. The feedback mechanism with the pituitary gland then kicks in—if the pituitary and hypothalamus are functioning properly—causing increased secretion into the blood stream of TSH, with blood level rising above its normal range. This mechanism may be sufficient, at least at first, to keep the levels of T4 and T3 in the blood high enough, at least by day, to be in their normal ranges. At night, when all functions diminish, including pituitary function, T4 and/ or T3 levels may drop below their normal ranges and all the metabolic functions that depend on the thyroid hormones may not occur adequately at night. The most common cause of primary hypothyroidism is autoimmune (Hashimoto’s) thyroiditis, an autoimmune disease in which the immune system attacks the thyroid tissue, usually causing it to become underactive. Occasionally the opposite occurs and overactive thyroid function, hyperthyroidism, or Graves’ disease is the result.

SECONDARY (OR PITUITARY) HYPOTHYROIDISM: This occurs when there is no problem within the thyroid gland itself but the pituitary gland, from which the thyroid gland expects a normal amount of TSH in order to produce a normal amount of T4 and T3 hormones, does not secrete adequate amounts of TSH. In this scenario, the free T4 and T3 serum levels will be below normal and the TSH level will be below or at the low end of its normal range. The thyrotropin-releasing hormone (TRH) level, if tested, would show an increase but is ineffective in raising the TSH level from the malfunctioning pituitary gland.

TERTIARY, CENTRAL OR HYPOTHALAMIC HYPOTHYROIDISM: This occurs when there is no malfunction within the thyroid or pituitary glands but there is inadequate secretion of TRH by the hypothalamus to keep the pituitary gland secreting enough TSH to produce enough T4 and T3 from the thyroid gland. This can occur in depression. T4, T3, TSH and TRH levels would all be low, and the thyroid functional level would be determined by the free T3 level (preferably by the dialysis method).

NON-THYROIDAL-ILLNESS (NTI) HYPOTHYROIDISM: This occurs when there is no problem in the thyroid, pituitary or hypothalamic glands but another illness in the body that interferes with the peripheral or tissue conversion of T4 into T3. T4, TSH and TRH levels are all normal but the serum free-T3 level, depicting the only active thyroid hormone level, is low. In an acute cardiac or pulmonary or other life-threatening condition, it may be temporarily advantageous for the body’s metabolism to be slowed by a low circulating level of free T3, so T3 treatment may not be indicated at that point. But, when chronic, non-life-threatening conditions, like chronic fatigue syndrome, chronic liver and other diseases, cause a low free T3 serum level, there is no advantage to the body and brain’s metabolism being slowed and T3—or combination T4/ T3 treatment—is usually not only beneficial but even essential in restoring normal energy and function to that person’s body and brain tissues.⁸

often, when there is no known pathology in the pituitary or hypothalamus, and no definite chronic disease diagnosis, it is assumed that only primary hypothyroidism needs to be screened (and often only with a TSH test, the most likely test to be abnormal if only primary hypothyroidism is present).

The conventional approach to screening for, diagnosing, and treating hypothyroidism is to measure the TSH level only, or occasionally the T4 if the TSH level is “abnormal” according to an older, higher “normal range.” The usual treatment is T4 only, which physicians assume will always convert sufficiently into the active hormone, T3. In conventional treatment the T3 level is rarely if ever be measured, especially using new, more accurate methods. No wonder that most patients are dissatisfied with their treatment of hypothyroidism!

The only way to be sure that *no* form of hypothyroidism is present, when the patient exhibits suspicious symptoms of hypothyroidism, is to *always* measure the free-T3 serum level (preferably by the new, more accurate dialysis method) and the free-T4 level, in addition to the TSH level. When a low free-T3 level is not suspected or measured for, it will not be found, reinforcing the perception that low T3 levels, without abnormal T4 and TSH levels, are rare or insignificant. If the FT3 level is always

measured, whenever thyroid function is tested, it will be found that a low T3 level is a common condition, leading to a lot of illness and death, while the patient is told that their thyroid function is normal (just because the TSH level, and perhaps a T4 level, is normal).^{9,10,11,12}

TWO REASONS FOR TIMIDITY IN TREATING THYROID UNDERACTIVITY OPTIMALLY

The two commonly known negative effects of treating hypothyroidism with too much thyroid hormone are cardiac arrhythmias (dangerous irregular or rapid heartbeats) and osteoporosis (thinning and fragility of the bones). However, most such thyroid-induced incidents occurred at a time when it was the accepted treatment to push for supra-physiologic (above-normal) blood levels of T4 in order to obtain optimal thyroid function. It was only when a more sensitive TSH

SOME REASONS WHY T3 IS NOT MEASURED AND PRESCRIBED MUCH MORE OFTEN

Much of the reason has to do with the physiology of the T3 hormone versus the T4 hormone.⁷ Whereas T4 is long-acting, with a half-life of a week, T3 is short-acting, with a half-life of 8-12 hours, depending on whether it is taken on an empty stomach or after meals. So T4 produces a more stable and consistent blood level; a blood test showing a certain T4 level can be relied upon to stay relatively stable, no matter when it is measured. However, I have found, over a 20-year time-period, in over 5,000 patients, that the free-T3 level does not fluctuate as much as is commonly believed. Also, it is important to understand the dynamics of testing in relation to the previous couple of doses of T3-containing thyroid hormone preparation.

If one or two doses of T4 are missed, the blood level will not be much different than if those doses had been taken. But if one, and even more so, if two doses of a T3-containing preparation are missed in the 24 hours prior to the blood draw, the blood level could be extremely low, indicating the patient needs a lot more T3 when in fact the level may have been normal, even optimal, while they were taking the prescribed doses regularly. It is lack of knowledge and sensitivity to the wide fluctuations in the serum level of T3, depending on the timing of doses and blood draws, that has led to the fear that endocrinologists have for using T3 and/ or T4/T3 combination preparations. One T4/T3 combo, Euthroid, an excellent product in my opinion, was even taken off the market by the FDA some years ago because physicians did not know how to take into account the time at which their measurements of the T3 hormone should be done in relation to the last 2 doses, in patients taking this product.

Secondly, the T3 level is affected by non-thyroidal factors such as stress, other diseases, several metal/mineral levels (such as lithium, mercury, copper and aluminum), the patient's degree of arousal and activity, etc. It is wrong to assume that if T3 is low only because of another disease or non-thyroidal factor, then it is not the concern of the endocrinologist but of the specialist covering the other disease or factor! And rarely is it ever communicated to the other specialist that “their disease or factor” is lowering the patient's thyroid function, or what might be done to remedy the low T3 level. Endocrinologists and internists need to accept responsibility for their patient's thyroid function as measured in the FT3 level, and not just the apparent normality or abnormality of the thyroid, pituitary and hypothalamus glands.

Lastly, for many years, available blood tests for the T3 hormone were not as accurate as those for T4 or TSH level. In the past 10-15 years, the tracer-dialysis method for measuring T3 has been available, although it costs 8-10 times as much as the non-dialysis test. Because it is so crucial to ascertain exact thyroid function, there is no excuse for not having this accurate test performed; it is not at all expensive when compared to many other tests that are run much more commonly, such as MRIs and CAT Scans. It only costs about \$80 and is covered by health insurance. Instead of getting this crucial information, many physicians still have these concepts of unreliability and expense in their heads and they are foregoing the accurate measurement of the crucial T3 level, which depicts the actual level of thyroid function.

test was developed, which showed severe suppression of the TSH level in such patients, that practitioners realized that too much thyroid hormone may have been prescribed in many of these patients. The only way to be sure, in each individual case, would have been to obtain the free-T3 serum levels, which were not done in the reported cases!

So we have no way of knowing how many of those patients were really over-prescribed or how many had suppressed TSH levels for other reasons. Of course, those who developed cardiac arrhythmias and/or osteoporosis could have been over-prescribed thyroid hormones, although there are other causes of these conditions, such as deficiencies in minerals, vitamins, protein and other hormones, which are too often automatically “blamed” on excessive thyroid function instead.

In my opinion, fears of precipitating or aggravating osteoporosis are unwarranted. Evidence for these fears is equivocal as both natural and iatrogenic (treatment-caused) hypo- and hyperthyroidism may cause the condition.¹³ Apparently, under-treatment of either thyroid state is a risk factor as well. The objections about aggressive thyroid treatment causing or aggravating osteoporosis and cardiac arrhythmias are found (in my practice) not only to be overblown, but to be entirely non-existent when optimal corrections are made for certain mineral, vitamin, protein and sex- and growth-hormonal deficiencies.

If one always measures the free-T3 level, without any doses of the T3-containing prescription being missed in the 24 hours prior to the drawing of the blood, and the level is never too high for that patient’s age and medical condition, one can be certain that one is not contributing to cardiac arrhythmias and osteoporosis by over-prescribing thyroid hormones. But, if one hardly ever measures the FT3 level, and relies excessively on diagnosis based on the TSH level, one can easily assume that a suppressed or very low TSH level automatically means that either the patient is being over-treated with thyroid hormone or doesn’t need treatment at all, when low TSH levels may actually indicate pituitary or hypothalamic underfunction. The dose of thyroid hormone is then unnecessarily reduced, or the patient doesn’t get any at all, and the patient now suffers from what will be suboptimal thyroid function and inadequately treated thyroid underactivity, with all the attendant negative effects, including heart attack, stroke, peripheral vascular disease and premature death. T3 is more effective than T4 in lowering excess lipid levels and in decreasing the risk of coronary

and cerebral arterial occlusion, even in patients who are merely slightly hypothyroid.¹⁴

Another reason physicians blame “over-treatment with thyroid hormone” for cardiac arrhythmias and osteoporosis or osteopenia is due to the fact that physicians do not use the more accurate blood tests for measuring magnesium, potassium and calcium, tests that reflect their true levels in the tissues and cells that they influence. The tests physicians normally use measure serum levels of magnesium and potassium but do not reflect their intracellular activity, which is where they exert their effects. Levels of magnesium, potassium and calcium in the red blood cells should be obtained, which *do* reflect their levels in the cells of the muscles and other tissues where they influence the neuromuscular activities of those tissues—heart and skeletal muscles being particularly pertinent, the former for cardiac arrhythmias and the latter for muscle cramps, spasms and “charley horses.” Consequently most physicians are at a loss to treat the latter as well, and often resort to quinine or drugs to stop this symptom artificially.

When the intracellular/red blood cell levels of magnesium and potassium are obtained, the physician realizes that many more people are deficient in these two anions—and *much* more severely so—than when the serum levels are measured. When these deficiencies are then taken care of, with large prescription doses of these minerals, patients are *far* less likely to respond negatively to high, or even high-normal, blood levels of thyroid hormones.

Similarly, the total serum calcium level is not a true reflection of the activity of calcium in the nerves, muscles and bones. It is the ionized

WILSON’S SYNDROME

Dennis Wilson, MD, was a practicing physician in Longwood, Florida in the early 1990s who noticed that many fatigued and low-body-temperature patients had low T3 levels (often with normal T4 and TSH levels). Instead of realizing that these were patients with the three other types of hypothyroidism than primary hypothyroidism, he proposed a new syndrome, which he called Wilson’s Syndrome (a name that had already been taken by a metabolic disease in which there is the accumulation of too much copper in parts of the eyes, liver and blood stream). His treatment, instead of a combination of T4 and T3 (so that the T4 level can be maintained as a source of newly-converted T3, when necessary, especially for the brain) was to prescribe high doses of T3 only. This treatment takes care of most of the physical needs of patients, in regard to thyroid function, but tends to leave their cognitive and other brain functions neglected. I don’t see any benefit in leaving out T4 altogether, especially as it is already the “junior partner” in the desiccated thyroid and Thyrolar preparations (which raise the T3 level more than the T4 level).

calcium level that needs to be obtained. This level actually shows that more people are now running calcium levels that are too high, contributing to heart attacks, kidney stones, joint and tendon problems, etc., and that there is too much public emphasis on the need for calcium in most people.

OVER-RELIANCE ON TSH LEVELS

I kid you not: TSH is regarded as the most accurate measure of thyroid function simply because the test itself is very accurate for what it measures: The thyroid stimulating hormone is not a thyroid hormone and its level in the blood is an indirect test of thyroid function, influenced by many factors other than the amount of the thyroid hormone levels in the blood! It is assumed that because the TSH test is an accurate test for the substance that it measures, that it is an accurate gauge of thyroid function! As I said, the people making this judgment are intelligent people; I can only assume they have a mental blind spot about this.

The other issue about the TSH test is the long time that it is taking most physicians, laboratories and medical journals to accept the newly recommended range of 0.3-2.5 as normal, which was set by the National Academy of Clinical Biochemistry (NACB), back in September 2002.¹⁵ Before that, the normal range was considered to

be 0.40-5.00, based on a cohort of only twenty-seven hospital workers in Edinburgh, Scotland, set by Professor Anthony Toft, the lead researcher of that study. There was no evidence that this cohort of study subjects completely excluded anyone with mild hypothyroidism.

Based on several epidemiological studies showing that TSH levels above 2.5 m U/L were *not* normal, the hundreds of thyroid and lab experts from around the world who make up the NACB concluded that, rather than 0.45-4.5 or 5.0, the new range should be considered as 0.3-2.5. And of course this range *only* applies when there is a question of primary hypothyroidism *on its own*.

If there is any element of secondary, tertiary or non-thyroidal-illness (NTI) hypothyroidism present, then the normal range cannot be any higher than 0.01-1.00, in my opinion. In practice this is the range that I aim for in most of my treated cases of hypothyroidism, while keeping the FT4 and FT3 levels optimal for their age and medical condition—most often high-normal but scaled down from that to the mid-range or even slightly below that in frail, cardiac or very elderly patients.

In January 2003, the American Association of Clinical Endocrinologists suggested the range should be 0.40-3.04 and said that this lower range would now mean that 13 million more Americans would be treated for hypothyroidism annually. A year or two later, Carol Spencer, one of the top researchers of the Endocrine Society, and its reigning president at the time, Leonard Wartofsky, MD, MPH, suggested a range of 0.3-2.0—which I had been using since I started treating hypothyroidism in 1989! Unfortunately, to this day, the labs and most treating physicians are still using the old, higher range. It should never be forgotten that these ranges apply only for the diagnosis of purely primary hypothyroidism. The range drops significantly for the other types, alone or in combination with primary hypothyroidism.

As a psychiatrist, I had already learned the importance of good thyroid

SERIOUS THOUGHTS ABOUT IODINE

It is well known that the original cause of most cases of hypothyroidism was iodine deficiency.⁷ In an effort to deal with that issue in a cost-effective manner, public health officials called for the substitution of iodized salt for non-iodized salt on all our grocery store shelves. This measure has taken the edge off the iodine deficiency problems of yesteryear—although not by any means completely, as good measurements of both organic and inorganic iodine levels in patients' blood or urine would show. But has anyone in thyroidology stopped to recognize the fact that we have actually substituted many more cases of autoimmune thyroiditis and primary hypothyroidism for the relatively fewer cases of iodine deficiency hypothyroidism that existed previously?

Could the mechanism for this phenomenon be that we used the wrong form of iodine—inorganic instead of organic—as a food supplement, and that this harsh form of iodine actually damages the thyroid tissue enough to trigger our immune systems to react against it? I believe this is a question that, at the very least, deserves serious consideration and investigation. I have laid out this case to physicians and researchers who have focused on iodine deficiency, and who recommend taking Lugol's liquid iodine or Iodoral tablets—which contains inorganic potassium iodide as well as organic iodine—but none of them has responded. Iodide is inorganic and harsh, burning flesh and other living matter with which it comes into contact; iodine is organic and gentle, usually cushioned or bound to proteins or other organic matter, providing the benefits of iodine to living matter without the harsh burning interactive effect.

In the mean time, I am recommending that my patients forego the iodized salt on the shelves of their grocery stores and use genuine 80-mineral sea salt instead, which also tastes much better! And, if their organic iodine serum level is low (measured at Boston University's Iodine Research Lab), to take 4-6 drops of organic iodine (such as Thyactin by TriMedica) after breakfast and supper daily (8-12 drops per day) rather than Lugol's liquid iodine or Iodoral tablets.

function in mood disorders,^{11,16,17,18} memory loss and other mental conditions, even psychoses.¹⁹ It is known that depressed patients with low T3 levels cannot be helped to come out of their depressions by any means, including electroshock therapy, unless the T3 level is at least normalized, if not optimized to the high end of its normal range. This was a very important lesson to me. Also, several psychiatric researchers, including two of my teachers at the University of Toronto,¹⁶ proved that bipolar-disordered patients do much better when their T4 level is optimized to the high end of its normal range, or even slightly above its high end. And one of the best treatments for bipolar disorders, the mineral lithium, is known to lower thyroid function, especially the T3 function. T3 must be “watched like a hawk” during lithium treatment, and optimized if low.²⁸ Depakote, and other anti-epileptic drugs used in the treatment of bipolar disorders also lower the T3 function in most patients, so the same advice applies.

“ALTERNATIVE” APPROACHES TO HYPOTHYROIDISM

Before the more accurate dialysis-method tests for Free-T3 and FT4 became available, Broda Barnes recommended a body temperature-measuring approach that could give some indication of possible thyroid hypofunction, though this is a non-specific approach; hypothyroidism, though the most common, is not the only cause of hypothermia. Temperature measuring was a useful tool at the time and may have enabled many cases that were missed by the blood testing measurements of the day to receive treatment, but now that we have the totally accurate dialysis Free-T3 and Free-T4 blood tests, there is much less need for that approach, except as an indicator to lay persons that they may be hypothyroid and should be investigated further for that possibility.

Since the early 1990s, Dennis Wilson, an MD in Florida, has been advocating a T3-only approach to the treatment of fatigue and low body temperatures that has been helpful in some patients.⁶ But it is puzzling as to why he should eschew T4 treatment altogether, especially since T3-only treatment lowers the T4 level to below or at the low-normal blood level and, as we know, the brain requires a good blood level of T4 to ensure sufficient crossing of the choroid plexus (blood-brain barrier) by sufficient T4 for

conversion to T3 in the brain cells. My suspicion is that many of Wilson’s patients, while attaining good physical thyroid function, remain deficient in the brain’s thyroid function for memory and mood.

More recently, John Lowe, DC, has come to the fore, through published articles,⁴ as an advocate of T3 treatment for chronic fatigue syndrome and fibromyalgia in patients with normal thyroid function, because of what he regards as thyroid resistance in the tissues of these patients. He does use and advocate T4 and T3 combination therapy in all hypothyroid patients.

In general, it can be said that most nutritional, integrative, wholistic, complementary, natural-medicine, anti-aging and alternative physicians are using the T4-T3 combination approach,^{20,5} rather than the T4-only approach that is still stubbornly used and recommended by most conventional physicians. I have some questions as to how diligently and regularly they are using the accurate blood tests mentioned above but I have no doubt, based on their reported outcomes, that in general their hypothyroid patients are doing much better than those of the conventional physicians. That is quite a lot to say, considering that most of them are not endocrinologists or even internists, supposedly those medical specialists who have board certifications in, and are in charge of, the diagnosis and treatment of thyroid conditions.

PHARMA’S INFLUENCE

Even more unfortunate than the T4-only

A SUMMARY OF THYROID MEDICATIONS	
SYNTHETIC	
Chemical or Generic Name	Trade or Brand Names
L-Thyroxine/ Levo-Thyroxine/ T4	Levoxyl, Levothroid, Synthroid, Unithroid
Tri-Iodo-Thyronine/ Lio-Thyronine/ T3	Cytomel, Cynomel
T4/T3 Combination Medication	Thyrolar (in grains, analogous to the strengths of Desiccated Porcine Thyroid)
NATURAL	
Chemical or Generic Name	Trade or Brand Names
Desiccated Porcine Thyroid Extract (USP)	Armour Thyroid, the original, now by Forest
(In Grains or Mg, 60mg = 1grain)	Naturethroid (non-allergenic), Westhroid (both by Western Research Labs)

conventional approach is the fact that the specific brand usually recommended and prescribed is Synthroid. In the 1990s, the company manufacturing Synthroid commissioned University of California at the San Francisco Medical School to carry out tests on the biological consistency of the product and publish the results on the three sales-leading T4 brands at that time, Synthroid, Levoxyl, and Levothroid. It would appear that Boots, Synthroid's manufacturer, was so confident that Synthroid would come out on top they were willing to pay for this research. However, when Synthroid only came in third, it turned out that they had not been so confident, business-wise, that they had not made sure to include a clause in the contract with UCSF stipulating that Boots would have the final say-so over publication of the article! The *Journal of the American Medical Association* (JAMA) accepted the article for publication but Boots put the kibosh on its printing!

Six years later, the *Wall Street Journal* published this scandalous story and Boots was forced to go ahead and allow the publication of the article. But to this day, due to physician loyalty from years of “winning and dining,” Synthroid is still one of the top two thyroxine (T4) products in sales in the U.S., despite costing a lot more. The other top seller now is Levoxyl, which won the three-way comparison test. This story is one egregious example of the business collaboration between pharmaceutical companies, on the one hand, and physicians, medical journals and medical schools, on the other, which is in place to serve the interests of these three powerful parties at the expense of the patients and the public.

The series of companies that have owned the Synthroid brand at various times (Boots, Knowles and now Abbott Labs) has also been heavily involved in the campaign to get T4-only as the only accepted treatment for all forms of hypothyroidism, despite the fact that (1) the thyroid gland produces T3 as well as T4; (2) patients on T3 and T4 do better and are much more satisfied with their treatment; and (3) three, out of the four types of hypothyroidism clearly require T3 as well as T4, in their treatment; and (4) there is not one shred of evidence that T4/T3 combination treatment—the only, and very successful, type of treatment for hypothyroidism during the first 60 years of this therapy (in the form of desiccated animal thyroid tissue)—has any disadvantages when its use is understood and its monitoring

TESTS FOR THYROID AND RELATED FUNCTIONS

TEST	NORMAL RANGE	COMMENTS
Free-Thyroxine (T4), by Direct Dialysis method	0.8-2.7ng/dL	The only accurate T4 level
Free Triiodothyronine (T3), by Tracer Dialysis	2.3-5.2ng/dL	The only accurate T3 level and the only true measure of thyroid function
Thyroid Stimulating Hormone (TSH) serum level	0.3-2.5 mIU/L	A relative or indirect test, <i>not</i> definitive of thyroid function.
Total Thyroxine (T4) serum level	4.0-12.0ug/dL	Inaccurate test of pre-hormone
Free-Thyroxine (T4), non-dialysis method	0.7-1.8ng/dL	Less accurate than dialysis test
Total Tri-Iodo-Thyronine (T3) serum level	100-240ng/dL	Inaccurate test for T3 activity
Free Triiodothyronine (T3), Non-dialysis method	2.3-5.2ng/dL	Less accurate than dialysis test
T3 Resin Uptake	25-39%	Primitive, inaccurate T3 test
T7 or Free Thyroxine Index/ FTI (T3U x T4 level)	1.0-4.0	Slightly better than T3U test
Microsomal TPO Antibodies Titer	<35 units	
Organic (Protein-bound) Iodine level	8.0-16.0	The only level that is necessary
Inorganic Iodide level	1.0-4.0	Valuable if too high, indication to avoid inorganic iodine (iodide)
Total Iodine level	9.0-20.0	Mixed conglomeration of the 2
Selenium serum level	140-280	Normal level needed
Zinc level	70-150	Normal level needed
Copper level	70-150	Make sure not too high
Mercury level	<5	Make sure not too high
Aluminum level	<7	Make sure not too high

Note: I treat metal and mineral toxicities with with oral chelation pills, available from supplement companies.

The best approach, one I have used very successfully since 1989 in over 5,000 patients, does not advocate any one prescription medication for all cases but has the goal of optimizing the free serum levels of both the T3 and T4 thyroid hormones.

is accurate. The companies making the other two brand names, Levoxyl (King Pharmaceuticals, which also makes Cytomel, the leading T3-only brand) and Levothroid (Forest, which also makes Armour Thyroid and Thyrolar, the natural and synthetic, respectively, T4/T3 combo products), are not involved in the T4-only campaign as they have diversified their portfolios to include T3-containing products. These have been both scientifically and commercially beneficial decisions on their part. The T4-only campaign has been almost totally successful in keeping T3 and T4/T3 combo products out of many other countries, including Australia, Israel and Spain (despite the Escobar-Morreale research team in Madrid, which showed that the addition of T3 to the T4 treatment was necessary to restore to normal the brain function of rats whose thyroid glands had been removed or destroyed).²¹

In spite of the fact that neither Boots nor Knowles is in business any longer (at least under those names), due to public outcry, the medical profession is still largely in the Synthroid camp with regard to brand names—and has even allowed its scientific judgment to be skewed on the issue of T4-only treatment by this pharma industry giant.

When I first started treating hypothyroidism, in 1989, there were several very bad generic products on the market that produced inferior results and blood levels. That is no longer the case. This is one area where some praise for the FDA is in order, though they went overboard in banning Euthroid—and may go overboard again, in a much worse way, banning all non-T4-only products, if Sidney Wolfe, MD, the misguided Public Citizen advocate, attains a high enough position in it to impose his view on the organization.

PUSHING THE T4-ONLY APPROACH TO TREATMENT

Toward the end of 2003 a rash of papers appeared in the October issue of the *Journal of Clinical Endocrinology and Metabolism*, along with an editorial by Kaplan and others,³¹ and an article in the December issue of the *Journal of the American Medical Association*,³² showing that the substitution of T3 for some of the T4 in T4-only-treated hypothyroid patients produced

no benefit. However, these study patients' T3 and T4 serum levels were even less optimized than those of the 33 patients in a 1999 paper by Bunevicius and others, published in the *New England Journal of Medicine*, which had found significant benefits³³—and which these newer papers were obviously intended to counteract. In addition, the patients in the 1999 study often ended up on a lower total daily intake of thyroid hormone (T3 and T4 combined) than they had originally needed when T4-only was their treatment.

Using patients with suboptimized serum T3 and T4 levels is no way to try to prove the futility of T3 treatment—not only for primary hypothyroidism patients but even less so for patients who have one of the other types of hypothyroidism, either as the sole cause of their hypothyroidism or as an additional cause of their total hypothyroid picture. There is no way to justify withholding the addition of T3 to secondary, tertiary and NTI hypothyroidism patients, because in them the T3 is the lower of the two thyroid hormones.

In these latter types of hypothyroidism there is a strong tendency for the free T3 level (determined by the dialysis method) to lag behind the dialysis free T4 level (determined by the dialysis method). This is partly because of the lack of TSH (which drives the conversion of T4 to T3), but may also be due to peripheral interference with the 5'-deiodinase enzyme's conversion/deiodination of T4 to T3, which occurs in NTI hypothyroidism. It is telling that the Kaplan editorial indicated a marked note of despair that an ideal treatment for all the symptoms of hypothyroidism will ever be found! Considering the flawed assumptions on which the editorial and the articles were based, it is not at all surprising to me that optimal treatment is an elusive goal to these researchers and opinion-makers!

If practitioners would simply switch their focus from "optimizing" TSH to truly optimizing the dialysis-tested free T3 and free T4 serum levels, they would achieve, as I have, this laudable goal in virtually all their patients!

Fortunately, the pendulum has already started to swing back toward evidence for the efficacy of the addition of T3 to T4 treatment. In 2002, an "old guard" resister of the combination approach, the same Anthony Toft who originally

set the “normal range” for TSH, recanted and expressed openness to the idea that, at least in some patients, the addition of T3 to T4 treatment may well be beneficial and may be the only way to optimize thyroid function. He said: “It would appear that the treatment of hypothyroidism is about to come full circle.”²⁷ Other researchers followed. We see this in two articles published in the first half of 2005, one by Saravanan and others published in the February issue of the *Journal of Clinical Endocrinology and Metabolism* and involving 697 primary hypothyroid patients,³⁰ and the other by Appelhof and others published in the May issue of the same journal and involving 141 primary hypothyroid patients.²⁹ The Appelhof paper compared the outcomes for two different ratios of T4 to T3, 5:1 and 10:1. It is notable that the patients receiving the higher amounts of T3 reported the most satisfaction with their results, especially in weight loss.

Unfortunately, both studies were still operating under the flawed assumption that whatever amount of T3 was added to any patient’s treatment, an equivalent amount of T4 had to be subtracted. Using my approach, the T4 dosage would have been increased in many patients due to its level still being suboptimal prior to the addition of T3 being added. Because of the feedback loop in which a high T3 level would suppress the TSH level, which would then cause the T4 level to drop because of less stimulation by TSH, the addition of T3 would have actually lowered the total amount of T4 in the blood stream, thus requiring additional amounts of T4. On increased intakes of T4 and the addition of T3, these patients would have really experienced improved thyroid function and physical and mental well-being, and not just the minimal improvements noted in these articles.

OPTIMAL TREATMENT

Optimal treatment should not revolve on answering the question, “What is the best type of thyroid medication to use?” The best approach, one I have used very successfully since 1989 in over 5,000 patients,²² does not advocate any one prescription medication for all cases but has the goal of optimizing the free serum levels of both the T3 and T4 thyroid hormones (measured by the dialysis methods). The physician should use

in treatment whatever combination of both thyroid hormones produces this result. (In a minority of cases, this will be T4 alone.) This is true regardless of whether the treatment results in a TSH level below its normal range. If such a result occurs, it simply means that the patient’s TSH feedback loop is not functioning properly, or else it would not be suppressed below normal when the T4 and T3 thyroid hormone levels are not elevated.

Unless the FT3 level in a new case is significantly higher than the FT4 level, it is not optimally helpful to treat with T4-only replacement. If the patient has a high TSH level (TSH drives T4-to-T3 conversion) and still cannot directly produce enough T3 from his or her thyroid gland and from the conversion of T4 to T3 peripherally, then that patient will not convert enough T3 from T4-only treatment after the TSH level drops.

The conventional approach to the treatment of hypothyroidism assumes that T4-only preparations convert peripherally to T3 in fairly standard amounts and at fairly standard rates. If that does not occur, it is considered to be because of extrathyroidal illness “which is of no concern to the physician charged with correcting thyroid dysfunction.” But, the clinical experience of always measuring free T3 and free T4 serum levels shows that this assumed scenario is not true for the majority of patients. At least 80 percent of my patients have required some T3 in treatment (always prescribed for two or three times per day), in addition to T4, for their free T3 and free T4 serum levels to be optimized.

Consistent measuring of both the FT3 and FT4 blood levels in all hypothyroid patients who are on T4-only therapy will very rapidly dispel the myth of adequate conversion (as well as the myth of “purely extra-thyroidal causes” of low T3 levels). A certain minority of hypothyroid patients do convert enough T4 to T3 at a sufficient rate for T4-only treatment to be effective in producing an adequate FT3 serum level. However, as stated above, the majority (80 percent) of patients require some combination of T3 and T4 to optimize FT3 and FT4 levels. Once these levels are optimized, the patient’s health and performance improve.

Optimizing both the FT3 and FT4 levels usually requires one of the following: (1) a combined T4/T3 preparation; (2) separate T4 and T3 preparations; or (3) a combination of T4 and a T4/T3 preparation. Desiccated whole hog thyroid (such as Armour Thyroid or one of its generics, like Naturethroid) is a good, relatively inexpensive starting point for the fixed combination T4/T3 treatment. Since it contains the short-acting T3 hormone, it should always be prescribed to be taken after breakfast and supper (in the twice-daily regimen) to reduce the rapidity of onset and prolong the duration of its action.


The major shift in thinking for most physicians is to recognize that desiccated thyroid hormone should be taken not just once a day, but at least twice daily after meals. An alternative would be dosages taken three times daily (every eight hours) without regard to meal times. If desiccated thyroid alone does not optimize both hormones’ free levels, additional T4 (or, less often, T3) treatment can be added in order to achieve the goal. If synthetic thyroid hormones are used exclusively, an estimated amount of T4 would be taken once daily along with an estimated amount of T3 to be taken twice daily, after breakfast and supper (or as described above, every eight hours without regard to meal times). Thyrolar is a synthetic

T4/T3 combo preparation, with T4 and T3 in the same ratios as that of desiccated pig thyroid extract; it should also be taken two to three times per day because of the short half-life of the T3 component.

Once optimal T3 and T4 hormone replacement has been achieved, the ultra-sensitive TSH remains useful as a gauge of optimal thyroid function only if it is still in the low end of its normal range, or it may go below the low end of the range (down to 0.01 mU/L). If this occurs, thyroid function will have been optimized by the yardstick of both the TSH level and the dialysis tested FT3 and FT4 levels.

As one who has both a personal and a perfectionist interest in optimal thyroid function rather than “normal” function, my view is that the only satisfactory optimization is the one just described. It remains to be decided, in certain rare cases in which the TSH needs to be suppressed below 0.01 mU/L for the dialysis FT3 and FT4 levels to be optimized, whether to accept suboptimal free T3 and free T4 levels or a sub-0.01 mU/L TSH level. My own preference would be for the latter, except in frail or cardiac-arrhythmic patients.

A small number of large or overweight thyroid hormone-resistant patients, usually women, may need up to 6-9 grains of Armour Thyroid per day (or the equivalent of thyroxine, counting 0.1 mg of T4 as equivalent to 1 grain); or a combination of the two. These patients seem to represent some form of thyroid hormone resistance syndrome, as described by Refetoff.²³

Patients who already take Armour Thyroid (or one of its generic equivalents) in once per day dosages should be advised to split their doses immediately, according to the twice- to thrice-daily regimen described in several sections above. Then, the Free-T3 levels obtained in blood monitoring of the treatment would be much more meaningful in terms of the all-important T3 fraction of the thyroid function. 

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The Great Iodine Debate

By Sally Fallon Morell

Iodine is critical to human health. It forms the basis of thyroid hormones and plays many other roles in human biochemistry. While the thyroid gland contains the body's highest concentration of iodine, the salivary glands, brain, cerebrospinal fluid, gastric mucosa, breasts, ovaries and a part of the eye also concentrate iodine. In the brain, iodine is found in the choroid plexus, the area on the ventricles of the brain where cerebrospinal fluid (CSF) is produced, and in the substantia nigra, an area associated with Parkinson's disease.

Iodine is essential to normal growth and development. Iodine deficiency in utero and during growth can result in cretinism, a condition of severely stunted physical and mental growth due to prolonged nutritional deficiency of iodine or from untreated congenital deficiency of thyroid hormones (hypothyroidism). The condition is characterized by short stature, delayed bone maturation and puberty, infertility, neurological impairment and cognitive impairment ranging from mild to severe. Iodine deficiency also causes goiter, the gradual enlargement of the thyroid gland. Both conditions have led to public health campaigns of iodine administration in many countries. The addition of iodine compounds to table salt or water represents the first attempt to provide nutrient supplementation via "fortification" of common foods.

In coastal areas, the action of ocean waves makes iodine gas. Once airborne, iodine combines with water or air and enters the soil.

IODINE IN PUBLIC HEALTH CAMPAIGNS

In the past, endemic cretinism due to iodine deficiency was especially common in areas of southern Europe around the Alps. It was described by ancient Roman writers and often depicted by medieval artists. The earliest Alpine mountain climbers sometimes came upon whole villages of cretins. In the late eighteenth and early nineteenth centuries, several travellers and physicians described alpine cretinism from a medical perspective, often attributing the cause to “stagnant air” in mountain valleys or “bad water.”

More mildly affected inland areas of Europe and North America in the nineteenth century were referred to as “goiter belts.” The degree of iodine deficiency was milder and manifested primarily as thyroid enlargement rather than severe mental and physical impairment. In Switzerland, where the soil is poor in iodine, cases of cretinism were abundant and even considered hereditary. As the variety of food sources dramatically increased in Europe and North America and the populations became less completely dependent on locally grown food, the prevalence of endemic goiter diminished.

Only in the early twentieth century did

scientists discover the relationship of cretinism with lack of iodine and thyroid deficiency. The addition of iodine to salt or drinking water is credited with the reduction or elimination of cretinism and goiter, although cretinism still remains a serious problem in many rural sections of China.

In coastal areas, the action of ocean waves makes iodine gas. Once airborne, iodine combines with water or air and enters the soil. Plant and animal foods grown on soil containing iodine will take up iodine so that it becomes available in the food. It can also be absorbed through the skin from air in seacoast areas, which may explain why many report improved health after a visit to an oceanside resort, and why individuals with severe allergies to iodine risk a reaction if they venture too close to the sea.

IODINE AND BREAST HEALTH

Japanese women have very low rates of breast cancer and consume high levels of iodine. This observation has led to the theory that high iodine levels in the Japanese diet, rich in seaweed and seafood, provide protection against breast cancer and other diseases of the breast.

Proponents of this theory note that today one

FOOD SOURCES OF IODINE

PLANT FOODS: Any food grown near the sea is likely to contain iodine, but especially rich sources include asparagus, garlic, lima beans, mushrooms, strawberries, spinach, pineapple and leafy greens. Coconut products, which always grow near the ocean, are good sources of iodine. Blackstrap molasses also provides iodine.

SEAFOOD: Iodine levels vary widely in fish and shellfish, but all seafoods contain some iodine. In published reports, cod, haddock, whiting, oysters and mussels test high. The hepatopancreas (yellow “butter” or “mustard”) in lobster tested as an extremely rich source and it is likely that the hepatopancreas of other saltwater shellfish would contain high levels of iodine as well.

BUTTER: Butter from cows pastured on iodine-rich soil will contain iodine. Look for butter from farms located near the ocean, or that have used seaweed or fish meal as a soil amendment. The cows should also be fed sea salt. The combination of iodine with selenium and vitamin A in butter make this traditional fat an ideal food for the thyroid gland.

SEAWEED: Levels of iodine in seaweed vary widely according to species and how the seaweed is dried. One study found a huge range of 2-817 mcg iodine per 100 grams. Iodine content is reduced when seaweed is dried in the sun, and iodine may vaporize during cooking and humid storage conditions. Some Asian seaweed dishes contain in excess of 1,100 mcg iodine (*Thyroid* Oct 2004, 14(10):836-841). Seaweed contains lignans, phytoestrogens that can depress thyroid function. This may explain why thyroid problems (except for goiter) are common among the Japanese, even though they eat a lot of seaweed.

SALT: Five grams (one teaspoon) of unrefined sea salt, a conservative estimate of the amount typically consumed in a day, provides only about 3 mcg iodine; iodized salt provides over 1,500 mcg iodine per five grams. The FDA's Tolerable Upper Intake Level (UL) for adults is 1,100 mcg per day; thus, it is possible to greatly exceed the UL by using iodized salt.

in seven American women (almost 15 percent) will develop breast cancer during her lifetime. Thirty years ago, when iodine consumption was twice as high as it is now (480 mcg per day) one in twenty women developed breast cancer. Thirty years ago, consumption of iodized salt was higher than it is today; in addition a form of iodine was used as a dough conditioner in making bread, and each slice of bread contained 0.14 mg of iodine. In 1980, bread makers started using bromide as a conditioner instead, which competes with iodine for absorption into the thyroid gland and other tissues in the body. Iodine was also more widely used in the dairy industry as a teat cleaner thirty years ago than it is now. According to this argument, 15 percent of the U.S. adult female population suffers from moderate to severe iodine deficiency.¹

The correlation of iodine deficiency with breast cancer is strengthened by reports in the

scientific literature. Women with a history of breast cancer are almost three times more likely to develop thyroid cancer than women with no such history, and there is a geographic correlation between the incidence of goiter and breast cancer.² Demographic studies show that a high intake of iodine is associated with a low incidence of breast cancer, and a low intake with a high incidence of breast cancer.³

Animal studies show that iodine prevents breast cancer, arguing for a causal association in these epidemiological findings. The carcinogens nitrosomethylurea and DMBA cause breast cancer in more than 70 percent of female rats. Those given iodine, especially in its molecular form as I₂, have a statistically significant decrease in the incidence of cancer.⁴ Other evidence adding biologic plausibility to the hypothesis that iodine prevents breast cancer includes the finding that the ductal cells in the breast, the ones most likely to become cancerous, are equipped with an iodine pump (the sodium iodine symporter, the same one that the thyroid gland has) to soak up this element.⁵

Similar findings apply to fibrocystic disease of the breast. In animal studies, female rats fed an iodine-free diet develop fibrocystic changes in their breasts, and iodine in its elemental form (I₂) cures it.⁶

As far back as 1966, Russian researchers showed that iodine effectively

MYSTERIES OF THE GOITER BELTS

The use of iodine supplementation in the goiter belts of the world—and these areas of endemic goiter and associated problems exist in a great many countries—represents one of the first public health initiatives involving treatment of the general population through the addition of a nutrient (in this case iodine) to water or food. “Mass prophylaxis” with iodine was pioneered by two countries, the U.S. and Switzerland. The first controlled experiment took place in the early 1920s in Akron, Ohio, where 5000 school girls took 0.2 g of sodium iodide daily in their drinking water for a period of ten days in the spring and autumn while an equal number of controls drank untreated water. Of those taking the iodide who began the experiment with a normal thyroid, none developed goiter, whereas 50 percent of the controls developed goiter. Following this study, several cities in the Great Lakes region started to add iodide to central water supplies and iodized salt entered the food supply. In Switzerland, many cantons introduced iodized salt, and those districts where it was used experienced a decline almost to zero in the incidence of goiter ([http://whqlibdoc.who.int/monograph/WHO_MONO_44_\(p443\).pdf](http://whqlibdoc.who.int/monograph/WHO_MONO_44_(p443).pdf)).

In spite of these successes, mass iodine supplementation programs met with much resistance, especially as side effects emerged. While the programs almost completely eliminated goiter, the prevalence of autoimmune thyroiditis increased in areas with iodated water or in those using iodized salt. For example, a threefold increase in autoimmune thyroiditis was noted once iodine deficiency was eliminated in an area of endemic goiter in northwestern Greece, an association confirmed in clinical settings. In one study, dietary restriction of iodine reversed hypothyroidism in twelve of twenty-two patients; seven of the patients with reversed hypothyroidism were re-fed iodine and became hypothyroid again (Anthony P Weetman, *Autoimmune Diseases in Endocrinology*, pp 50-51).

In addition, further epidemiological studies have cast doubt on the simple association of goiter with iodine deficiency. Recently British researchers compared the distribution of endemic goiter in England and Wales with the distribution of environmental iodine. Despite a very clear goiter belt through the west of England and Wales, they found no patterning in the environmental iodine distribution and concluded that the presence of endemic goiter is no indicator of how iodine is distributed in the environment or vice versa (Stewart AG and others. The Illusion of Environmental Iodine Deficiency. *Environmental Geochemistry and Health* 25:165-170, 2003). Early observations of goiter belts in Switzerland recorded strange distribution patterns, with villages completely free of goiter next to villages where goiter and cretinism affected many people, and even the promoters of mass iodine supplementation have noted that iodine supplementation works best in conjunction with an improvement of general nutrition.

Like all things in nature, the relationship of iodine status to thyroid health is resistant to simplified explanations. Many other nutrients contribute to thyroid health besides iodine, and numerous environmental and industrial toxins can depress thyroid function. And the body's ability to use iodine almost certainly has a genetic component. The moral: be wary of one-size-fits-all solutions and if you choose to supplement with iodine, be carefully observant of any side effects.

relieves signs and symptoms of fibrocystic breast disease. Seventy-one percent of 167 women suffering from fibrocystic disease experienced a beneficial healing effect when treated with 50 mg potassium iodide during the intermenstrual period.⁷

A 1993 Canadian study likewise found that iodine relieves signs and symptoms of fibrocystic breast disease in 70 percent of patients. This report is a composite of three clinical studies, two case series done in Canada of 696 women treated with various types of iodine, and one in Seattle. The Seattle study was a randomized, double-blind, placebo-controlled trial of 56 women designed to compare 3–5 mg of elemental iodine (I_2) to a placebo (an aqueous mixture of brown vegetable dye with quinine). Investigators followed the women for six months and tracked subjective and objective changes in their fibrocystic disease.⁸

An analysis of the Seattle study showed that iodine had a highly statistically significant beneficial effect on fibrocystic disease. Iodine reduced breast tenderness, nodularity, fibrosis, turgidity and number of macrocysts compared to controls. This 36-page report⁹ was submitted to the Food and Drug Administration (FDA) in 1995, seeking the agency's approval to carry out a larger randomized controlled clinical trial on iodine for treating fibrocystic breast disease. FDA declined to approve the study, because

“iodine is a natural substance, not a drug.” But the FDA has now decided to approve a similar trial sponsored by Symbolon Pharmaceuticals.

OTHER BENEFITS

Iodine may be helpful in treating other cancers because it induces apoptosis, programmed cell death. Apoptosis is essential to growth and development (fingers form in the fetus by apoptosis of the tissue between them) and for destroying cells that represent a threat to the integrity of the organism, like cancer cells and cells infected with viruses. In one experiment, human lung cancer cells with genes spliced into them that enhance iodine uptake and utilization underwent apoptosis and shrank when given iodine, both when grown *in vitro* outside the body and implanted in mice.¹⁰ Some practitioners predict a wider use for iodine in treating cancer.

Iodine may have other benefits—for which

FORMS OF IODINE

IODINE (I_2): Elemental iodine is available in a formulation called Thyactin by TriMedica, described as a “stabilized colloidal iodine preparation.”

IODIDE (I^-): Elemental iodine is unstable so it usually combines with another element, such as potassium or sodium. Salt is iodized using potassium or sodium iodide. Potassium iodide (KI) is available in tablet form in doses ranging from 0.23 to 130 mg. Lugol's solution contains 6.3 mg of molecular iodine/iodide per drop; Iodoral tablets contain 12.5 mg iodine/iodide each. Both Lugol's solution and Iodoral are one-third molecular iodine (5%) and two-thirds potassium iodide (10%). Most formulations of tincture of iodine are a combination of iodine and sodium iodide. Supersaturated potassium iodide (SSKI) contains 19–50 mg of iodide per drop. SSKI tablets are recommended in case of nuclear accident, to protect the thyroid gland from radioactive iodine, but otherwise should be avoided.

IODATE: Iodine in combination with oxygen, such as potassium iodate (KIO_3), is considered inferior to potassium iodide in terms of protection against radioactive iodine.

ENDOGENOUS ORGANIC IODINE COMPOUNDS: In food and in the body, iodine is usually bound with protein compounds. The main iodine-containing compounds in the body are the thyroid hormones thyroxine (T4, four iodine atoms joined to tyrosine) and triiodothyronine (T3, three iodine atoms joined to tyrosine).

SYNTHETIC ORGANIC IODINE COMPOUNDS: Drugs such as Amiodarone (an antiarrhythmic medication) contain iodine. The simplest organoiodine compound is iodomethane, used as a soil fumigant. More complex iodate compounds include nonylphenoxypolyethoxyethanol-iodine ($C_{17}H_{28}I_2O_2$) or Byacin, used as a germicide, as in teat washes.

DETOXIFIED IODINE: Sold as Atomidine, the manufacturing method is called a “modified detoxification process” which involves a stage in which electricity is run through the iodine in saline solution to produce a solution containing free iodine (see sidebar on Atomidine, page 43).

NASCENT IODINE: Similar to Atomidine, although requiring more electricity and a longer time to produce. The diatomic bond of the iodine molecule is broken and retains a high amount of electromagnetic energy. According to the manufacturer, “once in contact with fluids of the body, the charged atom of iodine starts a process of relaxation where it gradually loses energy over two to three hours.”

more study is needed. Evidence indicates that increased iodine consumption replaces and therefore helps detox other halogens, such as fluoride and bromide, and even toxic metals like lead, aluminum and mercury.¹¹ One theory is that liberal amounts of iodine in the diet can protect against the harmful effects of fluoridated water.¹² Iodine supports the immune system and protects against abnormal growth of bacteria in the stomach.¹³

In addition to the thyroid and mammary glands, other tissues possess an iodine pump (the sodium-iodine symporter) which allows iodine concentration. Thus, it is logical to conclude that iodine plays an important role in these organs—the stomach mucosa, salivary glands, ovaries, thymus gland, skin, brain, joints, arteries and bone.

A HISTORY OF IODINE THERAPY

Iodine was discovered in 1811 and shortly thereafter entered the *materia medica*. It was used in large amounts until the mid-1900s for treating various dermatologic conditions, chronic lung disease, fungal infestations, tertiary syphilis and even arteriosclerosis.¹⁴ The Nobel laureate Dr. Albert Szent Györgi (1893–1986), the physician who discovered vitamin C, wrote: “When I was a medical student, iodine in the form of KI [potassium iodide] was the universal medicine. Nobody knew what it did, but it did something and did something good. We students used to sum up the situation in this little rhyme:

If ye don’t know where, what, and why
Prescribe ye then K and I.”¹⁵

According to the 11th edition of the *Encyclopedia Britannica*, published in 1911, the pharmacological action of compounds containing potassium iodide, “is as obscure as their effects in certain diseased conditions are consistently brilliant. Our ignorance of their mode of action is cloaked by the term deobstruent, which implies that they possess the power of driving out impurities from the blood and tissues. Most notably is this the case with the poisonous products of syphilis. In its tertiary stage—and also earlier—this disease yields in the most rapid and unmistakable fashion to iodides, so much so

that the administration of these salts is at present the best means of determining whether, for instance, a cranial tumor be syphilitic or not.” (Perhaps what the iodides did was remove toxic mercury from the bodies of syphilitics who had been treated with mercury-based medicines!)

Sarah Pope, our Tampa/St. Petersburg chapter leader, reports that her father, a pediatrician, routinely gave Lugol’s solution (a combination of iodine and potassium iodide) to treat congestion in the lungs and sinuses. The theory was that the iodide drops would thin the mucus and make coughing more productive. The dose was five drops in water, continued for several days. In his professional experience, the remedy cleared congestion and, in the case of asthmatics, dilated the bronchial tubes and assisted breathing. This author received the same remedy as a child—the taste of iodine brings back memories of being sick and in bed, and receiving the drops in orange juice.

The decline in the use of iodine in medicine began in 1948 when researchers Wolff and Chaikoff published a landmark paper on the thyroid effects of increasing amounts of potassium iodide, injected into rats. The authors stated: “Organic binding of iodine within the glands can be almost completely blocked by raising the level of plasma inorganic iodine (PII) above a certain critical level, which for the rat amounts to about 20 to 35 percent.”¹⁶ This effect became known as the Wolff-Chaikoff (W-C) effect. According to the conventional view, high levels of intracellular iodide suppress the transcription of thyroid peroxidase (TPO) enzyme, along with NADPH oxidase, leading to a reduction in the synthesis of thyroid hormone, thyroxine.¹⁷ As proof of the W-C effect, the textbooks point to the fact that large amounts of potassium iodide can remedy hyperthyroidism. Another apparent confirmation is the thyroid-suppressing effect of several iodine-containing drugs, of which the most famous is amiodarone, which can cause both under- and overactivity of the thyroid. In a trial that compared amiodarone with other medications for the treatment of atrial fibrillation, biochemical hypothyroidism (as defined by a TSH level of 4.5-10 mU/L) occurred in 25.8 percent of the amiodarone-treated group as opposed to 6.6 percent of the control group (taking

Thus, it is logical to conclude that iodine plays an important role in these organs—the stomach mucosa, salivary glands, ovaries, thymus gland, skin, brain, joints, arteries and bone.

placebo or sotalol). Overt hypothyroidism (defined as TSH greater than 10 mU/L) occurred at 5.0 percent compared to 0.3 percent.¹⁸

Over time, these observations led to a decline in the use of iodine in medicine. While health officials came to a general agreement that iodine deficiency caused, in increasing order of severity, goiter and hypothyroidism, mental retardation and cretinism, authorities in the U.S. and Europe agreed upon a low Reference Daily Intake (RDI), formerly called the Recommended Dietary Allowance (RDA), of 100–150 mcg per day. This amount will prevent goiters and other overt signs of deficiency but may not be adequate to prevent other conditions of iodine deficiency, and is much lower than the amounts formerly given routinely to patients.

Critics of the W-C effect note that the standard dose of potassium iodide was 1 gram until the mid-1900s, which contains 770 mg of iodine, over five thousand times more than the RDI. For many years physicians used potassium iodide in doses starting at 1.5 to 3 gm and up to more than 10 grams a day, on and off, to treat bronchial asthma and chronic obstructive pulmonary disease, apparently with good results and few side

effects. Even today, dermatologists treat certain skin conditions, including fungal eruptions, beginning with an iodine dose of 900 mg a day, followed by weekly increases up to 6 grams a day as tolerated.

But the general use of iodine and iodine compounds in medicine has waned, as has its use as an additive in the food supply. Today's medical establishment is wary of iodine as are public health officials. Thyroidologists cite the W-C effect and warn that TSH (thyroid stimulating hormone) blood levels can rise with an iodine intake of one milligram or more.

In a 2000 review paper on use of iodine as a water disinfectant, author Joe Hollowell notes that studies indicate marked individual sensitivity to iodine; the most vulnerable to adverse

IODINE ON THE SKIN

The application of iodine to the skin as a way of iodine supplementation has been a common practice for over one hundred years. In 1932, researchers from the College of Pharmacy at Rutgers University carried out experiments on dogs and rabbits. They determined that, in fact, free iodine does penetrate through unbroken skin, although about 88 percent of the iodine applied evaporates from the surface within three days. Colloidal iodine (I_2 in aqueous solution) was found to evaporate more quickly than tincture of iodine (I_2 in alcoholic solution), and tincture of iodine evaporated more rapidly than Lugol's solution (iodine plus potassium iodide). The authors concluded: "... iodine which penetrates through the skin is removed only slowly from within this area into the body, thus forming an iodine depot in the skin for several days. In this prolonged retention of iodine within the skin, we see a favorable condition for a possible local prophylactic and therapeutic action." More recent studies, these involving humans, indicate that application of iodine to the skin is not effective in preventing the uptake of radioactive iodine by the thyroid gland; however, it is a slow but effective way to provide iodine supplementation, increasing serum levels at about 10-40 percent compared to oral ingestion (Abrahams, GE. The bioavailability of iodine applied to the skin. www.optimox.com).

Holistic practitioners have also applied iodine to the skin as a way to assess whole body iodine status—the so-called skin iodine patch test. The published data throws doubt on the effectiveness of the iodine patch test as a diagnostic aid. Many factors play a role in the disappearance of the yellow color of iodine from the surface of the skin including ambient temperatures and atmospheric pressure—the iodine will disappear faster in Denver than it will in Los Angeles. And in some people the iodine is reduced to iodide by the skin, which will result in the disappearance of the yellow color because iodide is white. Nevertheless, many have reported that the iodine applied to the skin remains longer after following the practice for several weeks, indicating a kind of saturation effect.

Unfortunately, we have no clinical trials on the use of iodine on the skin, but holistic practitioners have reported good results. For example, from Geoffrey Morell, ND: "A female patient with nodules on the thyroid gland and scheduled to have it removed applied tincture of iodine to the skin for over sixty days, at which point the stain remained for twenty-four hours. Upon reporting to the hospital for the operation, she was told that the nodules had disappeared and the operation was no longer necessary. In another case, a woman saw her visible goiter disappear after many weeks using tincture of iodine on the skin."

The inefficient uptake of iodine from the skin and slow release can be seen as an advantage for those wishing to safely improve their iodine status without medical supervision. This treatment does not seem to provoke a detoxification reaction that often occurs with oral ingestion of Lugol's.

Iodine applied to the skin is an excellent treatment for pre-malignant lesions, dark moles, keloid scars and other oddities of the skin. According to Dr. David Derry, "... iodine's ability to trigger natural cell death (apoptosis) makes it effective against all pre-cancerous skin lesions and likely many cancerous lesions. The local site is replaced with normal skin." He recommends topical iodine for insect bites as well (iodine4health.com/special/measurement/derry_measurement.htm).

For skin application, use mild tincture of iodine or Lugol's solution, both available on the Internet.

effects are those with underlying thyroid disease and previous low iodine intake. Problems from consumption of iodized water—including both hypothyroidism and hyperthyroidism—usually resolve after consumption is discontinued. A safe dose is 1-2 grams per day, and most can tolerate much higher amounts without problems.¹⁹

THE CHALLENGE

A challenge towards the reigning attitudes to iodine compounds came in 1997, when Dr. Guy Abraham, a former professor of obstetrics and gynecology at UCLA, mounted what he calls the Iodine Project. He had his company, Optimox Corporation, make Iodoral, the tablet form of Lugol's solution (which combines iodine and potassium iodide), and he engaged two family practice physicians, Dr. Jorge Flechas (in 2000) in North Carolina and Dr. David Brownstein (in 2003) in Michigan to carry out clinical studies with high doses of the iodine compound.²⁰ The project's hypothesis is that maintaining whole body sufficiency of iodine requires 12.5 mg a day, an amount similar to what the Japanese consume and over eighty times the RDI of 150 mcg. The conventional view is that the body contains 25–50 mg of iodine, of which 70–80 percent resides in the thyroid gland. Dr. Abraham concluded that whole body sufficiency exists

when a person excretes 90 percent of the iodine ingested. He devised an iodine-loading test where one takes 50 mg iodine/potassium iodide and measures the amount excreted in the urine over the next twenty-four hours. He found that the vast majority of people retain a substantial amount of the 50 mg dose. Many require 50 mg per day for several months before they will excrete 90 percent of it. His studies indicate that, given a sufficient amount, the body will retain much more iodine than originally thought, 1,500 mg, with only 3 percent of that amount held in the thyroid gland.

According to Abraham, more than 4,000 patients in this project take iodine in daily doses ranging from 12.5 to 50 mg, and in those with diabetes, up to 100 mg a day. According to these physicians, iodine at these doses does indeed reverse fibrocystic disease; allows diabetic patients to use less insulin and hypothyroid patients to use less thyroid medication; resolves symptoms of fibromyalgia; and stops migraine headaches. They report that the side effects of iodine, including hypo- or hyperthyroidism, allergies, swelling of the salivary glands and thyroid, occur in less than 5 percent.²¹ Urine tests confirm that iodine at these doses removes the toxic halogens fluoride and bromide from the body.²² They believe that iodism, an unpleasant brassy taste, runny nose, and acne-like skin lesions, is caused by the bromide that iodine extracts from the tissues. Symptoms subside on a lower dose of iodine.

In 2005, Dr. Abraham published a long paper challenging the Wolff-Chaikoff effect. "The W-C effect is supposedly the inhibitory effect of peripheral inorganic iodide (PII) levels equal to or greater than 0.2 mg/L (10–6M) on the organification of iodide by the thyroid gland of rats, resulting supposedly in hypothyroidism and goiter. These rats never became hypothyroid and thyroid hormones were not measured in their plasma. Nevertheless, the W-C effect, which did not even occur in the rats, was extrapolated to humans. The correct interpretation of the results obtained

ATOMIDINE

Atomidine is a stable compound of iodine in a saline solution "that liberates the element in an atomic or nascent state on contact with an excess of solvent, such as the fluids of the body." The use of Atomidine was popularized by Edgar Cayce, the so-called Sleeping Prophet, who gave medical diagnoses and suggested treatments in a trance. He often recommended the use of Atomidine, produced by Schieffelin & Company in New York, which he referred to as "iodine with the poisons taken out," for a variety of conditions including thyroid and other glandular problems, sore throat, gum problems and infection (www.iodinesource.com/Excerpts.asp). A typical treatment consisted of "one drop in half a glass of water each morning for five days before the morning meal, leave off ten days, and then take again" or "three to five drops in water morning and evening." He also recommended Atomidine for use as a gargle, as a douche and in topical preparations. (One intriguing ointment recipe called for adding 10 drops tincture of Benzoin, 5 drops Atomidine and 3 drams powdered snuff to 1 ounce 'Oil of Butterfat'.")

A theme running through Cayce's writings was the use of Atomidine as a gentle way of "cleansing or purifying the body," alternating with days when Atomidine was not used. He issued the same precautions for foods containing iodine, especially seafood, which he said should be consumed occasionally but not everyday. In one reading he indicated that seaweed could be toxic because of its high iodine content.

A paper published in the 1930s to promote Atomidine, written by the Schieffelin & Company, is posted on the internet (www.mnwellldir.org/docs/history/atomidine.htm). According to the report, Atomidine should be diluted when taken "and never given after a starchy meal." The paper cites many cases of improvement when Atomidine is given for gum problems, as an antiseptic after surgery, gastrointestinal problems, urinary tract infections, high blood pressure, goiter, malaria and tropical fevers, venereal disease, infections of eye, ear, nose and throat, bronchitis and asthma.

in rats from the W-C experiments is: Iodide sufficiency of the thyroid gland was achieved when serum inorganic iodide levels reached 10-6M These law-abiding rats refused to become hypothyroid and instead followed their normal physiological response to the iodide load. They were unjustly accused of escaping from the W-C effect. Labeling these innocent rats as fugitives from the W-C effect was a great injustice against these rodents.

“To the disgrace and stupidity of the medical profession, U.S. physicians swallowed the W-C forgery uncritically, which resulted in a moratorium on the clinical use of inorganic, non-radioactive iodine in effective amounts. However, this moratorium did not include toxic organic iodine-containing drugs and radioiodide. The iodophobic mentality prevented further research on the requirement for inorganic, non-radioactive iodine by the whole human body, which turns out to be 100-400 times the very recently established RDA. . . Prior to World War II and the W-C publication, U.S. physicians used Lugol solution safely, effectively and extensively in both hypo- and hyperthyroidism.”²³

Abraham cites a 1970 paper which evaluated the effect of Lugol’s solution, administered at five drops (30 mg iodine/iodide) three times a day in five thyrotoxic patients. Following a well-designed protocol, they reported, “It is concluded that the rapid decrease in T4 secretion induced

by iodine is not the result of an acute sustained inhibition of T4 synthesis (the Wolff-Chaikoff effect), but rather results from an abrupt decrease in the fractional rate of thyroid T4 release.”²⁴

Abraham thus argues that in hyperthyroidism, iodine/iodide in Lugol’s at a daily dose of 90 mg induced a physiological trend toward normalization of thyroid function, “a beneficial effect, not the fictitious W-C effect as proposed by Wolff and Chaikoff. It is amazing that the W-C effect, which is still mentioned in iodophobic publications, has never been confirmed in rats by other investigators and has never been demonstrated in any animal species.

“In 1948, there was already evidence that the W-C effect, if it was for real in rats (and it was not), did not occur in humans. The Lugol’s solution and saturated solution of potassium iodide (SSKI) were used extensively in medical practice for patients with asthma. The recommended daily amount was 1,000-2,000 mg.

IODINE LOADING PROTOCOL

Developed by Drs. Guy Abraham and David Brownstein, the protocol involves giving 50 mg iodine/iodide per day as Iodorol® and monitoring the excretion of iodine in the urine. The high levels of iodine/iodide are necessary to replace bromine and fluorine (and also chlorine) that have built up in the tissues, due to years of toxic exposure.

The iodine/iodide loading test is based on the concept that the normally functioning human body has a mechanism to retain ingested iodine until whole body sufficiency for iodine is achieved. During supplementation with iodine, the body progressively adjusts the excretion of iodine to balance the intake. As the iodine content in the body increases, the percentage of the iodine retained decreases, showing up as an increased amount of iodide excreted in the 24-hour urine collection. When whole body sufficiency for iodine is achieved, the absorbed iodine/iodide is excreted as iodide in the urine.

In the U.S. population, the percent of iodine load excreted in the 24-hour urine collection prior to supplementation with Iodorol averages 40 percent. After three months of supplementation with 50 mg iodine/iodide per day, (four tablets of Iodorol) most non-obese subjects not exposed to excess goitrogens achieve whole body iodine sufficiency, arbitrarily defined as 90 percent or more of the iodine load excreted in the 24-hour urine collections.

In addition to monitoring iodine excretion, Brownstein and colleagues also monitor urinary excretion of bromide and fluoride, goitrogenic halogens that the iodide gradually replaces over the course of supplementation. To facilitate the excretion of bromine, Dr. Brownstein recommends a combination of vitamin C, unrefined salt and magnesium, including baths of Epsom salts and sea salt. The patient is advised to avoid all sources of bromine, including fire retardant in carpet, clothing and mattresses, and bromide-treated breads, baked goods and grains. Bromine and chlorine are used extensively in materials in automobiles of recent vintage—in the seats, armrests, door trim, shift knobs—so avoidance of riding in cars with the windows closed is important.

Dr. Brownstein reports numerous benefits from the protocol including reduced need for thyroid medications, reduced allergies, increased energy, reduced fibromyalgia, weight loss, clearing of ovarian cysts and reduction of hypothyroid symptoms such as brain fog. In his experience, side effects including metallic taste in mouth, sneezing, excess saliva and frontal sinus pressure occur in less than 5 percent of patients.

For ongoing thyroid protection, it is important to avoid sources of bromide, fluoride and chloride (including environmental perchlorates, often found in drinking water). That means drinking purified or filtered water instead of tap water, consuming organic food (conventional produce and grains are treated with bromide-, chloride- or fluoride-containing pesticides and fumigants), avoiding bromated breads and consuming plenty of unrefined sea salt along with an iodine-rich diet.

Sources: <http://www.optimox.com/pics/Iodine/loadTest.htm#6>; <http://iodine4health.com>; http://iodine4health.com/ortho/brownstein_ortho.htm.

This amount was used in patients with asthma, chronic bronchitis, and emphysema for several years. Hypothyroidism and goiter were not common in this group of patients. Those amounts of iodine would have resulted in serum inorganic iodine levels 100 times higher than the serum inorganic iodide levels of 10-6M claimed by Wolff and Chaikoff to result in the W-C effect.”

According to Abraham, iodine in amounts considered “excessive” by endocrinologists today represent only 3 percent of the average daily intake of iodide by 60 million mainland Japanese, a population with a very low incidence of cancer overall, and in particular of the female reproductive organs.

According to Abraham, “Medical iodophobia resulted in the thyroid hormone thyroxine replacing iodine in iodine deficiency-induced simple goiter and hypothyroidism. Thyroxine has been the most prescribed drug in the U.S. for several years. So, the manufacturers of thyroxine benefited tremendously from this deception. It

also resulted in the destruction of the thyroid gland by means of radioiodide in patients with hyperthyroidism caused by iodine deficiency, although this condition had previously been treated successfully with Lugol solution. The radioablation of the thyroid gland with radioiodide resulted in 90 percent of these patients becoming hypothyroid within the first year and eventually joining the ever-increasing thyroxine-consuming population.

“Supplying thyroid hormones to iodine-deprived individuals masks the iodine deficiency and can result in a zombie-like effect. The patients are capable of performing physical work but are not able to think and reason at maximum capacity. An even greater negative effect is realized if iodine deprivation is combined with goitrogen saturation, using the potent goitrogens bromide, fluoride and perchlorate in the food and water supply.

“Iodine is involved in many vital mental and physical functions, and yet whole body sufficiency for iodine has never been determined. Why? Medical textbooks discuss inorganic, non-radioactive iodine only in relation to the most severe deficiencies of this essential element: cretinism, hypothyroidism and endemic goiter. Based on an iodine/iodide loading test developed by the author to assess whole body sufficiency for iodine, the amounts of iodine needed for whole body sufficiency and optimal physical and mental health are 250-1,000 times higher than the amount of iodine needed to control cretinism, hypothyroidism and endemic goiter.”

Thus, according to Abraham and his colleagues, the Wolff-Chaikoff

REPORT FROM GERMANY

“Here in Germany we are suffering from an epidemic of autoimmune thyroid disease due to the government’s huge campaign to iodize our salt and water. The food industry uses iodized salt for all products. Animal feed and milk is iodized. The German government claims that the earth has no iodine and that natural foods do not contain enough iodine. Even food for fresh water fish is iodized.

“The German thyroid league admits that iodization has caused a rise in autoimmune diseases of the thyroid. About ten million Germans are affected. Doctors tell us about studies showing that these patients should not eat iodized food as it makes their disease worse. Thyroid illnesses are painful and hard to heal. The thyroid gland controls our body’s metabolism. Also, the eyes can be destroyed. The standard therapy is to remove or radiate the sick gland. Then the patient needs thyroid hormones to survive.

“The sad thing is that most people don’t even know that what they eat is iodized. In Germany iodized salt in packaged food has to be declared but iodine in salt in restaurants or in bread is not labeled.

“The German iodization program is not popular with the public at all. We had it during the Third Reich and it took quite a lot of government campaigning to bring back mass iodization, a public relations campaign to convince people that iodine is healthy and has no dangers at all. Government officials say that people can choose iodized or noniodized salt but no one mentions the hidden salt. In the Third Reich they called it “silent iodization,” to avoid any resistance.

“I have run a self help group for thyroid patients for years now and it is a very difficult situation for patients to not have enough food! It is even difficult to get all the information we need.

“We hear a lot of discussion about fluoride in the water but I am surprised that there is none about iodine. In Germany they sell salt with iodine and fluorine—both affect the metabolism and can damage the thyroid gland. Natural salt has the advantage of giving us minerals we need and in a way that our body can handle instead of the low quality chemistry added to food or water. I know that the healthy thyroid gland needs more than iodine. It also needs vitamins A and C, and many other minerals. A natural diet can offer more benefit for our health and fewer dangers and side effects. The tragedy is that the WHO has started to ban natural foods. In India, Himalayan salt was banned and iodized salt then sold five times as much as natural salt. Poor people can’t afford the natural salt and so many didn’t have any salt at all anymore. The German media reported on protests in India and I don’t know whether natural salt is allowed again.

“Here in Germany, thousands of thyroid patients are signing a petition asking the Bundestag to change the law, and to require iodization labels on packages.”

Ute Aurin

effect is of no clinical significance. An elevated TSH, when it occurs during treatment with Lugol's solution, is "subclinical." This means that no signs or symptoms of hypothyroidism accompany its rise. Some people taking milligram doses of iodine, usually more than 50 mg a day, develop mild swelling of the thyroid gland without symptoms. Abraham believes that the vast majority of people, 98 to 99 percent, can take iodine in doses ranging from 10 to 200 mg a day without any clinically adverse effects on thyroid function.

THE DEBATE

With Abraham's work, and its popularization by physicians such as Jorgas and Brownstein, many health-conscious individuals began taking Lugol's solution regularly, even without medical supervision. A challenge to this practice came from Dr. Alan Gaby in an editorial published in the *Townsend Letter for Doctors and Patients*, August/September 2005.²⁵

"Recently, a growing number of doctors have been using iodine supplements in fairly large doses in their practices," wrote Gaby. "The treatment typically consists of 12 to 50 mg per day of a combination of iodine and iodide, which is 80 to 333 times the RDA of 150 mcg (0.15 mg) per day. Case reports suggest that iodine therapy can improve energy levels, overall well-being, sleep, digestive problems and headaches. People with hypothyroidism who experienced only partial improvement with thyroid

hormone therapy are said to do better when they start taking iodine. In addition, fibrocystic breast disease responds well to iodine therapy, an observation that has been documented previously. The reported beneficial effects of iodine suggest that some people have a higher-than-normal requirement for this mineral, or that it favorably influences certain types of metabolic dysfunction.

"While iodine therapy shows promise, I am concerned that two concepts being put forth could lead to overzealous prescribing of this potentially toxic mineral. First is the notion that the optimal dietary iodine intake for humans is around 13.8 mg per day, which is about 90 times the RDA and more than 13 times the 'safe upper limit' of 1 mg per day established by the World Health Organization. Second is the claim that a newly developed iodine-load test can be used as a reliable tool to identify iodine deficiency."

Gaby takes issue with the argument that the optimal human requirement is 13.8 mg per day,

REACTION TO IODORAL

"Three articles appeared recently in *The Original Internist* concerning clinical research with the use of iodine/iodide in megadoses. Our medical group, consisting of three MDs and one ND/Acupuncturist decided that we should try to find out whether any one of us was iodine-deficient. Our practice is in the Great Lakes region that was described as the 'Goiter Belt' by David Brownstein. We therefore followed Brownstein's recommendation for the iodine/iodide loading test. Five individuals within our office took the test and, by the criteria outlined, we were all iodine-deficient.

"Three of us, two MDs and our Laboratory Director, then proceeded to take the 50 mg of Iodoral a day with the intention of repeating the iodine/iodide loading test after three months of treatment. After about six weeks of continuous treatment, I experienced dysphagia [difficulty swallowing], resulting in lower chest pain on swallowing both food and fluids. This was particularly marked with hot fluids, a totally new experience for me. I told the Laboratory Director that I was going to discontinue taking the Iodoral since I had concluded that it was the potential cause. To my surprise, she told me that she had experienced exactly the same symptom and had also discontinued the treatment. The other two MDs who took the treatment did not experience this symptom. Some four weeks after discontinuation of the Iodoral, we both continue to experience the same kind of dysphagia, although it is much milder. We can only conclude that we experienced some esophagitis though this has not been proved by further study.

"If this is indeed a toxic effect of the Iodoral, we concluded that it needed to be drawn to the attention of the CAM medical community. If the conclusions are correct, we should expect to hear that other 'guinea pigs' have experienced something similar. The question remains in our minds as to whether the test outlined by Brownstein is an accurate determination of chronic iodine deficiency. It may well be that iodine has a sensitive dose relationship like that which is so well known with selenium, for example, and with other minerals. The question, put so eloquently recently by Alan Gaby is whether we are embarking on a strategy that can be toxic for some while beneficial for those sick individuals reported by Brownstein and his co-author, Guy Abraham. Indeed, as Gaby questioned later, of the 4,000 patients treated by the Michigan Clinic, how many were carefully monitored in detail for potential side effects? Since gastroesophageal reflux (GER) is mentioned in a drug commercial as a common affliction, it might be that some patients who are being treated with high-dose iodine would never conclude that GER might be related to the iodine consumption. It might not be recognized as a side effect even by a physician, since it is so remote from any expected or predicted symptom."

Derrick Lonsdale MD, FAAP, FACN, Westlake, Ohio

The Townsend Letter for Doctors and Patients, April 2006

by noting that “the idea that Japanese people consume 13.8 mg of iodine per day appears to have arisen from a misinterpretation of a 1967 paper. In that paper, the average intake of seaweed in Japan was listed as 4.6 g (4,600 mg) per day, and seaweed was said to contain 0.3 percent iodine. The figure of 13.8 mg comes from multiplying 4,600 mg by 0.003. However, the 4.6 g of seaweed consumed per day was expressed as wet weight, whereas the 0.3 percent-iodine figure was based on dry weight. Since many vegetables contain

at least 90 percent water, 13.8 mg per day is a significant overestimate of iodine intake. In studies that have specifically looked at iodine intake among Japanese people, the mean dietary intake (estimated from urinary iodine excretion) was in the range of 330 to 500 mcg per day, which is at least 25-fold lower than 13.8 mg per day.”

Regarding the other argument in support of a high iodine requirement, namely that it takes somewhere between 6 and 14 mg of oral iodine per day to keep the thyroid gland fully saturated with iodine, “. . . it is not clear that loading the thyroid gland or other tissues with all the iodine they can hold is necessarily a good thing. . . Our thyroid glands have developed a powerful mechanism to concentrate iodine, and some thyroid glands (or

IODINE CONTENT OF FOODS

SOURCE	IODINE CONTENT mcg/100 g	IODINE CONTENT per typical serving
Dried Kelp	62,400	3120 ²
Iodized Salt	7,600	1520 ³
Saltwater fish ¹	330	330
Blackstrap Molasses	158	24
Catfish	118	118
Beans, dried	115	58
Seafoods	66	66
Spinach	56	28
Vegetables	30	15
Milk and Milk Products	14	14
Eggs ⁴	13	13
Seal Meat	3	3
Seal Blubber	12	12
Seal Kidney	5	5
Seal Liver	10	10
Whale Meat	1	1
Whale Blubber	15	8
Cod Flesh	74	74
Cod Liver	32	32
Wild Fowl	5	5
Caribou ⁵	0.4	0.4
Oysters	46	46
Mussels	107	107
Lobster Hepatopancreas ⁶	2,250	450
Uniodized sea salt ⁷	50	3 ³

1. Haddock, whiting, herring

2. Assumed serving of 5 g dried kelp (*Nutrition in Japan*, 1964. Nutrition Section, Bureau of Public Health, Ministry of Health and Welfare, Tokyo, Japan, March 1965).

3. Daily intake if 5 g iodized salt consumed.

4. These 11 values from Ensminger AH and others. *The Concise Encyclopedia of Foods and Nutrition*. CRC Press, 1995, p 587.

5. These 10 values from Anderson S and others. Iodine Content of Traditional Greenlandic Food Items and Tap Water in East and West Greenland. *International Journal of Circumpolar Health* 2002 61:332-340.

6. These 3 values from Dermelj M and others. Iodine in different food articles and standard reference materials. *Fresenius' Journal of Analytical Chemistry* 1990 338:559-561.

7. Aquaron R. Iodine content of non iodized salts and iodized salts obtained from the retail markets worldwide. <http://www.webiodine.com/dl/engl/pdf/lit/4.1.14.pdf>.

other tissues) might not function as well after a sudden 90-fold increase in the intake of this mineral. . . relatively small increases in dietary iodine intake have been reported to cause hypothyroidism or other thyroid abnormalities in some people.”

As for the observation that iodine supplementation “promotes the urinary excretion of potentially toxic halogens such as bromide and fluoride. While that effect might be beneficial for some people, it is not clear to what extent it would shift the risk-benefit ratio of megadose iodine therapy for the general population.”

Abraham and colleagues promote the use of the iodine-load test, in which the patient ingests 50 mg of a combination of iodine and iodide and the urine is collected for the next twenty-four hours. The patient is considered to be iodine-deficient if less than 90 percent of the administered dose is excreted in the urine, on the premise that a deficient person will retain iodine in the tissues, rather than excrete it in the urine. According to the literature of a laboratory that offers it, 92-98 percent of patients who have taken the iodine-load test were found to be deficient in iodine.

According to Gaby, “the validity of the test depends on the assumption that the average person can absorb at least 90 percent of a 50-mg dose. It may be that people are failing to excrete 90 percent of the iodine in the urine not because their tissues are soaking it up, but because a lot of the iodine is coming out in the feces. There is no reason to assume that a 50-mg dose of iodine, which is at least 250 times the typical daily intake, can be almost completely absorbed by the average person. While this issue has not apparently been studied in humans, cows fed supraphysiological doses of iodine (72 to 161 mg per day) excreted approximately 50 percent of the administered dose in the feces.”

Gaby expressed concerns about iodine toxicity: “Fairly modest increases in iodine intake have been reported to cause thyroid dysfunc-

tion, particularly hypothyroidism. In a study of 33 Japanese patients with hypothyroidism, the median serum TSH level decreased from 21.9 mU/L to 5.3 mU/L (indicating an improvement in the hypothyroidism), and one-third became euthyroid, when the patients stopped eating seaweed and other high-iodine foods for 1–2 months. In a survey of 3,300 children aged 6–12 years from five continents, thyroid glands were twice as large in children with high dietary iodine intake (about 750 mcg per day), compared with children with more normal iodine intake. While the significance of that finding is not clear, it suggests the possibility of iodine-induced goiter. In addition, there is epidemiological evidence that populations with ‘sufficient’ or ‘high normal’ dietary iodine intake have a higher prevalence of autoimmune thyroiditis, compared with populations with deficient iodine intake. In a study of children in a mountainous area of Greece with a high prevalence of goiter, public-health measures taken to eliminate iodine deficiency were followed by a three-fold increase in the prevalence of autoimmune thyroiditis. In addition, modest increases in dietary iodine have been suspected to cause hyperthyroidism in some people, an effect that is known to occur with larger doses of iodine.

“Other well-known side effects of excessive

HOW MUCH IODINE?

FDA: The Dietary Reference Intake (DRI) is set at 150 mcg per day for men and women with a Tolerable Upper Intake Level (UL) of 1,100 mcg per day. This amount would be greatly exceeded by those using even modest amounts of iodized salt.

TRADITIONAL DIETS: Iodine levels in traditional diets varied widely. Weston Price reports 131-175 mcg for the Inuit (about the level of the DRI) and 25-34 mcg for Canadian Indians (considered very low, although they did not exhibit thyroid problems). Based on the reported values in seaweed, some have claimed levels of 12 mg (12,000 mcg) in Japanese diets, although a published analysis of iodine intake in Japan found a range of 45-1921 mcg per day (*J Nutr Sci Vitaminol* (Tokyo). 1988 Oct;32(5):487-95). Without seaweed, it would be very difficult to exceed 1,000 mcg per day, based on values found in typical traditional foods (see chart, page 47).

CHERASKIN RECOMMENDATIONS: In a study of reported daily iodine intake versus reported total number of clinical symptoms and signs (as judged from the Cornell Medical Index Health Questionnaire), an intake of approximately 1,000 mcg per day correlated with the lowest number of reported symptoms, that is, the highest level of health.

ABRAHAM/BROWNSTEIN RECOMMENDATIONS: Abraham and Brownstein argue that the iodine requirement is 1,500 mcg per day (1.5 mg), which is difficult to achieve without using a species of seaweed high in iodine, iodized salt or supplementation. They believe that because of widespread bromide and fluoride toxicity, most people today actually require between 5 and 50 mg per day, amounts only possible with supplementation, which should only be taken under the supervision of a physician to monitor iodine status.

iodine intake include acne, headaches, allergic reactions, metallic taste in the mouth and parotid gland swelling. While the doses of iodine reported to cause those side effects have often been higher than those currently being recommended, some people appear to be especially sensitive to the adverse effects of iodine.” Gaby concludes: “The possibility that high-dose iodine/iodide can relieve certain common conditions is intriguing. Considering the positive anecdotal reports, an empirical trial of iodine/iodide therapy, based on the clinical picture, seems reasonable. The case has not been made, however, that the average person should markedly increase his or her iodine intake in an attempt to saturate the tissues with iodine. Nor has the case been made that the iodine-load test can provide reliable guidance regarding the need for iodine therapy. Thyroid function should be monitored in patients receiving more than 1 mg of iodine per day.”

Subsequent counter arguments by Drs Abraham and Brownstein and rebuttals by Dr. Gaby focused on the amount of iodine in the Japanese diet and the safety of ingesting large amounts. An important point made by Abraham and Brownstein is that the requirement for iodine depends on the goitrogen load. Bromine, now very prevalent in the food supply, is a goitrogen, and may increase our need for iodine. They also claim that many of the toxic effects reported in the literature were due to radioactive forms of iodine. Finally, they dispute the assertion that the values of iodine in seaweed consumed by the Japanese were computed in dry weight. “The average daily intake of iodine by mainland Japanese in 1963 was 13.8 mg, based on information supplied by the Japanese Ministry of Health, which used only dry weight in their calculations, confirmed by a phone interview of one of us (GEA) on June 21, 2005, with officials of this organization.”²⁶

Abrahams and Brownstein also defended the urine test for iodine loading, noting studies showing that organic iodine is not excreted in the feces. They also cited their own clinical experience. “Our experience at the Center for Holistic Medicine has shown that patients with the lowest urinary iodide levels on the loading tests are often the most ill. Many of these patients with very low urine iodide levels following the loading test have severe illnesses such as breast cancer,

thyroid cancer or autoimmune thyroid disorders. All of these conditions have been shown in the literature to be associated with iodine deficiency. Positive clinical results were seen in most of these patients after supplementation of orthoiodosupplementation within the range of 6.25-50 mg of iodine/iodide (1/2 to 4 tablets of Lugol in tablet form).”²⁷

In response, Gaby noted that “all but one of the references I cited discussed the adverse effects of inorganic iodine” and that while Dr. Lugol did use high doses of his combination iodine/potassium iodide compound, “they were recommended primarily to treat infections (iodine is a broad-spectrum antimicrobial agent) and hyperthyroidism, not as routine nutritional support for the average person.” Finally, he notes a review article, published in 2000, in which the authors state that in the 1920s and 1930s, when potassium iodide (KI) was widely used, many patients died of KI-induced side effects, particularly pulmonary edema and associated heart failure.²⁸

CONCLUSIONS

It is axiomatic that there are no uncomplicated issues in the field of diet and health—and the subject of iodine is no exception. What conclusions can we draw from these conflicting assertions about iodine, especially supplementation containing iodide?

Let’s start by looking at the RDI of 100-150 mcg iodine per day. Most would argue that this intake is too low. Yet it is in line with what Weston Price reports in primitive diets. In preliminary analyses, he found a range of 24-32 mcg daily for northern American Indians and 131-175 daily for the Inuit.²⁹ Apparently the Inuit of the far north do not eat seaweed.³⁰ Unfortunately, Price did not carry out more extensive measurements, especially among those he reported to eat seaweed—the Gaelic peoples of the Outer Hebrides and the Andean Indians of Peru.

It appears to be very difficult to estimate the iodine intake in diets that contain seaweed. Based on the reported values in seaweed, some have claimed levels of 12 mg (12,000 mcg) in Japanese diets,³¹ leading Abraham and Brownstein to propose that “only mainland Japanese consume adequate amounts of iodine and that

The possibility that high-dose iodine/iodide can relieve certain common conditions is intriguing. Considering the positive anecdotal reports, an empirical trial of iodine/iodide therapy, based on the clinical picture, seems reasonable.

99 percent of the world population are deficient in inorganic, non-radioactive iodine; that is, they have not reached whole body sufficiency for that essential element.”³²

However, a published analysis of iodine intake in Japan found a range of 45-1921 mcg per day,³³ and Weston Price found healthy peoples consuming iodine amounts in the lower end of this range. Furthermore, without seaweed, it would be very difficult to exceed 1,000 mcg per day, based on values found in typical traditional foods (see chart, page 47). For example, one meal of cod, one meal of shellfish including the 20 grams of the hepatopancreas, and one meal of mussels, plus additional meat, vegetables and legumes would supply about 1,000 mcg iodine; diets based on meat, even organ meats, would supply considerably less.

The late distinguished researcher Emmanuel Cheraskin and his colleagues conducted a survey of reported total number of clinical symptoms and signs (as judged from the Cornell Medical Index Health Questionnaire) and correlated the findings with average iodine consumption. An intake of approximately 1,000 mcg per day correlated with the lowest number of reported symptoms, that is, the highest level of health.³⁴

Abraham and Brownstein argue that the human iodine requirement is 1,500 mcg per day (1.5 mg), which is difficult to achieve without using seaweed, iodized salt or supplementation. They argue that because of widespread bromide and fluoride toxicity, most people today require between 5 and 50 mg per day, amounts only possible with supplementation; they do note that such supplementation should only be taken under the supervision of a physician to monitor iodine status.³⁵

We cannot ignore the many reports of improved health using various types of iodine supplementation—whether through tincture of iodine on the skin, the atomidine protocol recommended by Edgar Cayce or use of iodine/potassium iodide compounds as proposed by Drs. Abraham and Brownstein. Increased exposure to goitrogenic mercury, bromides and fluoride compounds, and soy products ubiquitous in the food supply, coupled with declining levels of thyroid-supporting nutrients such as selenium and vitamin A in modern diets, may explain

why some people need much higher levels of iodine than those found in traditional diets. Dr. Brownstein is to be credited with alerting the public to the dangers of bromides increasingly used in processed foods, sodas, vegetable oils, breads and even replacing iodine in teat washes for dairy cows, as well as in thousands of consumer products.

The Abraham protocol does carry a risk of adverse reactions and should be carried out under the supervision of a physician with experience in using it. As these physicians point out, consuming iodine in milligram doses should be coupled with a complete nutritional program that includes adequate amounts of selenium and magnesium, and, they claim, omega-3 fatty acids, and with careful supervision of detoxing reactions. According to Dr. Brownstein, chloride increases renal clearance of bromide and the use of salt or ammonium chloride shortens the time required for bromide detoxification. He recommends oral administration of sodium chloride (6-10 gm per day) or intravenous sodium chloride for increasing the renal clearance of bromide.³¹

Dr. Gaby’s call for a careful study should not be ignored. Not every physician reports the sterling results described by doctors using the Abraham protocol, and some individuals—including this author—have experienced adverse reactions to Lugol’s solution. The study should include a control group and groups using other iodine therapies, such as tincture of iodine on the skin, the atomidine protocol or even oral supplementation with elemental iodine rather than the iodine/potassium iodine combination. Comparison of the iodine-load urine test with the blood test for iodine status in relation to various symptoms of thyroid deficiency is another area begging for further research. Studies involving even a small number of individuals would be helpful in providing further answers to the great iodine debate. ☯☯

Without seaweed, it would be very difficult to exceed 1,000 mcg per day, based on values found in typical traditional foods.

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COMMERCIAL VEGETABLE OILS AND THE THYROID GLAND

Although Dr. Weston Price found healthy populations groups that consumed fairly low levels of iodine, studies indicate that in modern times, most people do best at the upper end of the scale, taking in around 1,000 mcg per day. Often overlooked in this discussion are the many factors in the modern diet that depress thyroid function and increase our need for iodine—not only exposure to halogens like fluoroide, chloride and bromide, but also deficiencies in vitamin A, vitamin B₆, selenium and magnesium. Reduced exposure to halogens and abundant intake of these key nutrients probably reduces our requirements for iodine.

Another modern dietary factor that interferes with thyroid function is the consumption of omega-6 fatty acids from commercial vegetable oils—by some estimates these omega-6 fatty acids contribute 20 percent of calories in “civilized” diets. As pointed out by Stephen Guyenet in his Whole Health Source blog, omega-6 fatty acids may suppress thyroid signaling. He cites studies showing that corn oil greatly suppresses the liver’s response to T4 when compared to lard, safflower oil suppresses the liver’s response to T3 when compared to beef tallow, and linoleic acid suppresses the response of brown fat and the liver to T3. The liver is one of the main sites of thyroid hormone-responsive heat production. In fact, in the 1970s researchers were considering omega-6 linoleic acid as a treatment for hyperthyroidism.

Thus it is likely that those who avoid commercial vegetable oils and minimize omega-6 consumption, while emphasizing intake of nutrient-dense animal fats like butter and cod liver oil, would have iodine requirements much lower than 1,000 mcg per day, and would be able to meet their iodine requirements with a diet of whole foods, especially one containing sea food.

Source: Omega-6 Linoleic Acid Suppresses Thyroid Signaling, December 19, 2008. <http://wholehealthsource.blogspot.com/2008/12/omega-6-linoleic-acid-suppresses.html>.

Farm and Ranch

CHANGE AT USDA: THE STATE OF THE ORGANIC NATION

By Mark Kastel

The state of the (organic) nation is not good—especially for dairy farmers. That shouldn't be too much of a surprise since the entire economy is hurting.

LOOKING BACK—2008

I've spent the last 20 years as an evangelist for organic and sustainable farming and direct-marketed food. There is no doubt that abandoning agrichemicals has a big payback for consumer health and our environment. But, in addition, organics has been the best social justice vehicle we've seen in the family farming movement. The premium price for organic commodities has, historically, been a lifesaver for the now more than 10,000 family farms in organics.

In 2008, like all other conventional prices, the price for organic feed for dairy cows and other livestock shot up so quickly—without milk processors and marketers paying farmers more to make up the gap—that for the first time in history, conventional dairy farmers were making more than organic (conventional milk prices were at unprecedented highs)! Grass-based, raw milk, and direct marketers are doing, not surprisingly, much better economically.

THE LAY OF THE LAND—2009

The entire organic industry is navigating in uncharted waters. We are experiencing the first protracted economic recession since organics was commercialized, and the landscape is shifting.

1. According to AC Nielsen 56 percent of consumers are eating more meals at home. Because organic food is still underrepresented in food service (restaurants and institutions),

a shift toward more home-cooked meals is a positive trend for the industry.

2. However, a disturbing trend is a shift away from name brands to more private-label organic products. These “anonymous” products are oftentimes divorced from what consumers think they are supporting when they buy organic food (for example, food sourced from factory farms in China).
3. Meanwhile, as consumers at supermarkets cut back on organics or “trade down” to private labels, many managers of cooperatively owned natural foods groceries around the country are telling us that their sales, while slowing, are still growing! Many co-ops are ahead or, if behind last year's sales volume, only in the low single digits. Co-op shoppers, and WAPF members, the market's most sophisticated consumers, are not about to turn to conventional agribusiness for their food.

WASHINGTON REPORT

Change was the message that President Obama ran on last year. It's something that is badly needed at the U.S. Department of Agriculture. Dubbed the “People's Department” by Abraham Lincoln, whose administration created the agency, it has become a captive of powerful corporate agribusiness interests and an enabler of an industrial-scale farm production model that's been squeezing family farmers out of business for the last half century. As most readers of this journal know, this agenda has resulted in what nutritionist Bernard Jensen coined an “empty harvest.” There's been an attrition of nutrition in our food commensurate with the loss of ecologically sustainable and diverse family farmers.

Although more and more consumers are making connections with local farmers we still need to buy a fair percentage of our (organic) food supply through normal commercial channels.

Although more and more consumers are making connections with local farmers we still need to buy a fair percentage of our (organic) food supply through normal commercial channels. If you care about the integrity of organic food and farming, the USDA's management of the National Organic Program has been an abomination. It's not just mismanagement—the track record has been one of intentional monkeywrenching of the department's industry oversight. This includes ignoring and watering down enforcement actions, failing to ensure that the nation's organic certifying agencies are properly performing their jobs with competent staff, and not providing sufficient resources for the review and evaluation of specific materials and ingredients used in organic food and agriculture.

Just as with the conventional food production system, these actions have resulted in a shift to factory farm production and cheap imports, predominantly from China.

It's an extremely unfortunate situation because the overwhelming majority of domestic family farmers engaged in organic agriculture are practicing it with ethics and integrity, meeting the expectations of consumers. And consumer interest in organic food is surging, with sales

up—even during the beginning of the recession—more than 15 percent last year and totaling in excess of \$23 billion. But some serious pruning of the organic sector is needed to weed out scofflaws, industrial-scale livestock facilities, and others bent on shortchanging organic standards.

So, is Obama bringing the mantle of change to the USDA? Make no mistake about it that Michelle Obama's White House vegetable garden, and a certified organic garden planted by the Secretary of Agriculture at their headquarters, are meant to be strongly symbolic. Those of us old enough to remember will note that the first thing president Reagan did, symbolically, was to rip the solar collectors off the roof of the White House, which had been installed by Jimmy Carter.

NEW MANAGEMENT AT THE USDA

It's been a slow slog filling out the raft of political appointees who will direct the agency. But here's a look at who's been appointed and a quick assessment of their perspectives.

Former Iowa Governor Tom Vilsack was tapped by Obama to lead the USDA. Vilsack has a reputation as a pragmatist and seasoned politician. During his tenure as governor, he helped Iowa become an early state leader investing in an organic program at their department of agriculture. Iowa's land grant university also began addressing the needs of organic farmers. But his administration also supported increased genetic engineering and had close ties to corporate agribusiness.

This track record raised concerns for some at the grassroots in the organic community. Others, including a number of officers at some of the largest organic corporate entities strongly welcomed the Vilsack selection. Shortly after his confirmation, Vilsack sent a message by breaking up pavement and planting a "people's garden" at the USDA. The symbolism

ORGANIC DECEPTION

Burt's Bees lip balm was originally sold at independently owned health food stores. But more recently, Burt's Bees products have appeared everywhere—in grocery stores, drug stores and big-box stores like Target and Wal-Mart. That's because Burt's Bees is now owned by Clorox, a massive corporation that has historically cared very little about the environment.

Tom's of Maine is owned by Colgate-Palmolive, a massive company with a revenue of approximately \$11.4 billion. Danone, the French conglomerate which also owns Brown Cow, has acquired a majority holding in Stoneyfield; this is the same Danone that had to recall large quantities of its yogurt in 2007 after it was found to contain unsafe levels of dioxins. Horizon Organic milk was bought out by the largest dairy company in the U.S., Dean Foods, in 2005. Odwalla is now owned by Coca-Cola. Almost as soon as Coca-Cola bought the company, it stopped selling the fresh-squeezed orange juice that had made Odwalla famous and popular—fresh squeezed can't last the days and weeks the juices are now in transit or on the shelf. Pepsi bought Naked Juice in 2006, in order to compete with Odwalla. Smuckers grabbed several juice mainstays from the health food store shelves: After The Fall, R.W. Knudsen and Santa Cruz Organic.

Kashi cereals was bought in July, 2000 by Kellogg's, the twelfth-largest company in North American food sales (but if you look at a box of Kashi's "Go Lean Crunch," for example, you will find not one mention of the fact that Kellogg's owns them). Kraft Foods bought the natural cereal maker Back to Nature. Kraft is a subsidiary of Altria, which also owns Philip Morris, one of the world's largest producers of cigarettes.

General Mills owns Cascadian Farm. Barbara's Bakery is owned by Weetabix, the leading British cereal company. Health Valley and Arrowhead Mills are owned by Hain Celestial Group, a natural food company traded on the NASDAQ, with H.J. Heinz owning sixteen percent of the company.

(Source: Your Favorite 'Natural' Brands May Not Be What They Seem, www.Mercola.com.)

includes conservation practices and green gardening practices.

Vilsack has also expressed interest in confronting the obesity epidemic in this country, which also implies addressing the quality of food children and adults eat. Less well known has been his push for biotechnology and the use of genetically engineered crops as a solution to hunger in Africa and other hungry parts of the world.

Vilsack has now made several key appointments since his confirmation in January. The number two slot in the agency, the Deputy Secretary, widely viewed as the chief operating officer at the USDA, was given to Dr. Kathleen Merrigan, a strong advocate for organics. Merrigan was most recently an assistant professor at Tufts University and director of its Agriculture, Food, and Environment program inside the Friedman School of Nutrition Science and Policy.

Merrigan helped write the Organic Foods Production Act as a staffer for Senator Patrick Leahy. The 1990 federal law established the nation's organic program. She was later hired by the USDA as a consultant to finalize the drafting of the organic regulations earlier this decade. She was on the list of the "Sustainable Dozen," a group of people viewed by sustainable, local, and organic food supporters as potential high-quality USDA leaders. A petition circulated by Food Democracy Now garnered nearly 100,000 signatures for the roster of possible appointees.

Merrigan intimately understands organics and is aware of many of the problems facing USDA's management of organics. She spoke in May to the semiannual meeting of the National Organic Standards Board, indicating that she was interested in more enforcement activities by the National Organic Program (NOP). She also emphasized that a full-time program manager was needed at the NOP, which is currently lacking. Her remarks were warmly received, she took questions for about a half hour and then announced an additional four-hour listening session in her office later that day for those at the meeting. Merrigan was also quick to point out that her job at the USDA, with its 100,000 employees, is far broader than organics. All in all, an auspicious beginning to a relationship with a senior official at the Department—something wholly lacking during the Clinton and G. W. Bush administrations.

Sniping at Merrigan and Vilsack for even expressing interest in organics, has already begun. Within the last two months, at least three powerful republican senators have challenged and questioned agency direction pertaining to its traditional support for conventional agriculture, attempting to use organics as a wedge issue to discredit the new administration in the eyes of farmers.

Another key appointment at the USDA is Edward Avalos as Undersecretary for Marketing and Regulatory Programs. Avalos, who has yet to be confirmed, is from New Mexico. He grew up on a family farm that raised cotton, wheat and specialty crops. For the past twenty-nine years, he has worked at the state's Department of Agriculture. Cornucopia's sources, who have worked closely with Avalos in New Mexico, speak highly of him and describe him as someone who is fastidious and will look at all sides of an issue.

The Avalos appointment is important because, as undersecretary, he oversees the Agricultural Marketing Service, the arm of the agency

inside of which the National Organic Program is housed.

And the AMS is scheduled to have a new director as well. In early May, the appointment of Rayne Pegg as AMS director was announced. From California, Pegg has been working for the California Department of Food and Agriculture as its Deputy Secretary of Legislation and Policy. She has also been heavily involved with the state's Farm Bureau chapter. Pegg's family was heavily involved with agricultural cooperatives. Cornucopia is told by its California allies that Pegg is direct, blunt and bright and sees herself as a problem solver.

One particularly troublesome issue surrounding Pegg was her involvement with the Leafy Green regulations that were put into place in California following the spinach *E. coli* outbreak in September, 2006. She was a principal in the creation of the regulations. A huge downside of the rules has been the destruction of wildlife habitat and buffers on farms in an attempt to sterilize the surrounding environment. The regulations have also unfairly burdened small farmers growing a diverse number of fresh food crops for local markets with costly food safety testing requirements. We have been told that she now understands that there are unintended downsides to the new regulations. We will look forward to meeting with her personally in order to share our concerns.

FOOD SAFETY

Food Safety is an issue gathering enormous attention and will likely lead to legislation reforming FDA (and perhaps USDA) responsibilities later this year. The California leafy greens approach is being touted as a potential national model and could seriously injure organic and local producers of high quality foods. These farmers are part of our nation's food safety solution—not part of the problem. Stay tuned.


Many dedicated patrons of local farms have received ominous e-mails warning that legislation on food safety, moving through Congress, specifically HR 875, could put local and organic farmers out of business, even ban home gardens. While we believe these allegations are untrue, careful analysis by The Cornucopia Institute of pending legislation leaves us with two important

conclusions. One, the nation's corporate agribusinesses are out of control and we obviously need our government to provide strict oversight. Two, as a community we need to be on guard so that new regulations, which are needed for industrial-scale farming, do not place the true heroes in agriculture—local family farmers—at a competitive disadvantage.

NATIONAL ANIMAL IDENTIFICATION SYSTEM (NAIS)

The USDA has taken their show-and-tell on NAIS on the road, visiting farm communities around the country. The recent release of their cost analysis, on initial review, appears to be wholly inadequate in addressing disproportionately higher costs that smaller, direct livestock marketers would face. For a more complete analysis please find an article by our respected colleague, Judith McGearry, on page 84.

Although this report certainly contains some dark clouds on the horizon, the organic farming

community has a secret weapon: consumers like yourself who are willing to go out of their way to procure superior quality, nutrient-dense food for your families. And you have proven time and time again that you are willing to stand, shoulder to shoulder, with the best farmers in this nation, protecting their ability to produce environmentally responsible, truly humane, and nutritionally superior food. This is a powerful alliance to be reckoned with in the marketplace and in Washington. 

Mark Kastel is co-founder of The Cornucopia Institute, a progressive farm policy research group based in Wisconsin and director of its Organic Integrity Project. For almost 20 years prior to its launch he was president of M. A. Kastel and Associates, Inc. His professional practice included political consulting, lobbying work on behalf of family farm groups and business development work benefiting family-scale farmers. Mr. Kastel has played a key role in a number of cooperative ventures designed to empower farmers in the marketplace. His development work has focused on creating sustainable farmer-owned businesses with an emphasis on dairy production and marketing. Kastel played a key role in the farm community's response to the introduction of rBGH. Kastel lives on a 160-acre organic farm in the rugged hills of southwestern Wisconsin, near the tiny burg of Rockton. Visit his website at www.cornucopia.org.

RAW ALMOND FIGHT TWISTING THROUGH COURTS

Lawyers for almond farmers challenging the USDA's raw almond pasteurization mandate have filed motions asking the judge to reconsider several key points in her decision on March 9, which dismissed their lawsuit on procedural grounds. Washington, D.C. Federal District Court judge Ellen Segal Huvelle ruled that the almond farmers have no right to have their concerns about the alleged illegal nature of the almond treatment scheme heard in court.

But lawyers representing the farmers say that the judge's ruling was erroneous. In particular, they note that one key area where the judge mistakenly asserts that the interests of the almond farmers are adequately represented by almond handlers in the regulatory process. Handlers buy almonds from farmers, process them and ship the nuts to market. One can see that the interests of the buyer (handler) are not necessarily always the same as those of the seller (farmer).

The judge also mistakenly concluded that several of the farmer plaintiffs, who sell their own raw almonds, are handlers. In fact, they are not handlers, nor have they ever claimed to be handlers—a classification which would require a license from the state of California.

Most importantly, Judge Huvelle's decision sidestepped the merits and substance of the lawsuit contesting the legality, efficacy and impacts of the raw almond pasteurization mandate. These arguments have yet to be debated in court.

New legal motions were filed with the judge asking her to reconsider her ruling. A decision can be expected by mid-June. Should Judge Huvelle refuse to change her ruling, an appeal will be pursued at the next judicial level in an effort to win for farmers their right to be heard in court. Cornucopia Institute is continuing to help coordinate the farmers' legal strategy and has been raising funds for legal costs associated with that effort.

It has also been learned that the Almond Board of California has decided to establish a subcommittee of organic almond handlers. While this development is certainly welcome, it would have helped if this had been done several years ago so that the organic sector could have weighed in on the controversial raw almond pasteurization plan.

This year's almond harvest is forecast to total around 1.45 billion pounds, marking another bumper crop. Conventional prices have plummeted in the last couple of years and price pressure is also impacting organic almonds, although not as severely. Meanwhile, imports—especially untreated and unpasteurized raw imports—are booming and have displaced California raw almonds in many retail stores. This is a most unfortunate and distressing situation for those almond farmers who had been supplying a growing and vibrant raw niche market.

Cornucopia is committed to fighting for the return to grocers' shelves of an American-grown, highly nutritional raw food that's been eaten with confidence and enjoyment for decades. To stay abreast of the Institute's activities, watch the Authentic Raw Almond Project page on Cornucopia's website, www.cornucopia.org.

Know Your Fats

MORE SATURATED FAT ATTACKS

By Mary G. Enig, PhD

In the U.S., the anti-saturated fat campaign has become more subtle, consisting not of blatant propaganda—the kind of finger wagging food Puritanism that is increasingly turning us off—but of spin-doctored reports on scientific studies.

Butter consumption has been rising over the last few years—not by leaps and bounds, but steadily upward—both in the U.S. and in Europe. This shift in consumption patterns may explain a resurgence of anti-saturated fat messages in the U.S. and overseas.

Britain launched a “health” campaign in February of 2009 to “raise awareness of the health risks of eating too much saturated fat,” and lamenting the fact that “the UK is currently eating 20% more saturated fat than UK Government recommendations.”

The highly coordinated campaign includes a 40-second TV advertisement in which a “jug of saturated fat is poured down the sink, overloading and blocking a kitchen pipe to vividly bring to life the message that too much saturated fat is bad for your heart.” Print ads encourage Britons to cut the fat off their meat, switch to lower-fat dairy products and use vegetable oils instead of butter when cooking.

In New Zealand, newspaper articles have urged the population to eat less bacon and sausage, avoid butter and pastries containing butter, and take children off of full-fat milk after the age of two “to avoid clogging their arteries.”

IN THE U.S.

As Americans are increasingly turning again to real food, newspaper articles have appeared praising the virtues of real butter, fatty meats and lard. A breakthrough was an article entitled “Dieting? Don’t fear the fat,” by Allison Boomer, published in the *Boston Globe* (January 7, 2009). Noting that fats provide satiety she writes, “You might feel quite satisfied, for instance, if you crumble two slices of crisp bacon and one ounce of cheese on your salad or eat that delectable golden skin on your broiled chicken. No one is advising you to eat mountains of fries or other

foods made with commercially processed fats. The suggestion is a judicious amount (about 1 tablespoon per meal) of naturally occurring fats. Think of butter, cheese, chicken or duck fat, even well-marbled steaks, as a taste-enhancing complement to a meal.” Five years ago, no major newspaper would have published anything along the lines of this common-sense advice. Boomer’s article is a sign that the walls of the lowfat dungeon are crumbling.

Thus, in the U.S., the anti-saturated fat campaign has become more subtle, consisting not of blatant propaganda—the kind of finger wagging food Puritanism that is increasingly turning us off—but of spin-doctored reports on scientific studies.

SATURATED FAT AND THE LIVER

One example is a study entitled “Saturated Fatty Acids Promote Endoplasmic Reticulum Stress and Liver Injury in Rats with Hepatic Steatosis,” published in *Endocrinology* (2006 147;(2):943-951).

In this study, markers for liver function worsened in rats on a diet high in sucrose (68 percent sucrose, 12 percent corn oil and 20 percent casein) or high in lard oil (45 percent lard oil, 35 percent corn starch and 20 percent casein) compared to a high starch diet (68 percent corn starch, 12 percent corn oil and 20 percent casein) or a high polyunsaturated diet (35 percent corn starch, 45 percent corn oil and 20 percent casein). The lard oil diet was described as high in saturated fat, hence the title of the study, which fingers saturated fatty acids. The title contains no mention of the similar adverse effects from the high sucrose diet; but even worse is the characterization of lard oil as high in saturated fat. The definition of lard oil is “oil consisting chiefly of olein that is expressed from lard.” Olein is a

glyderide of oleic acid; that is, oleic acid joined to a glycerol molecule. Thus the diet described as high in saturated fatty acids was actually high in monounsaturated fatty acids! (None of the diets could be called normal diets.)

It would be surprising if saturated fats caused liver problems in experiments like these because for sixty years, research has shown that saturated fats protect the liver. A recent study, published in the *Journal of Nutrition* (145:904-912, April, 2004) found that saturated fat from beef tallow reduced alcoholic liver toxicity in rats whereas corn oil increased markers of liver toxicity. Moral: If you drink, eat plenty of butter and fatty meats.

SATURATED FATS IN PREGNANCY DIET

More spin doctoring comes with a November, 2008 study published in the *Journal of Clinical Investigation* (doi:10.1172/JCI32661) which compared the results of two diets fed to pregnant monkeys. One group got a “healthy” diet of fruits, vegetables and 15 percent fat. The other group got a high-calorie junk food diet with 35 percent of calories as fat, and which, according to a news report, included potato chips, peanut butter and chocolate. (A description of the diet does not appear in the scientific report.) In the latter group, fatty liver disease developed in the fetuses that were sacrificed for testing, and the offspring allowed to be born became obese.

The obvious conclusion of this study is that a junk diet, high in sugar and processed vegetable oils, during pregnancy will adversely affect the offspring. But according to a public statement by Professor Jacob Friedman, one of co-authors, the study “implicates the saturated fat in the diet as the culprit.” Yet there was twice the level of unsaturated fat as saturated fat in the junk food diet. The study was funded by grants from the National Institutes of Health, which is firmly wedded to the hypothesis that saturated fats are the cause of chronic disease. Obviously, Dr. Friedman has funding for future studies in mind.

BLOOD VESSEL INFLAMMATION

Another saturated fat attack comes from a February, 2009 study published in the American Heart Association journal *Circulation Research*

entitled “Proinflammatory Phenotype of Perivascular Adipocytes: Influence of High-Fat Feeding.” The researchers found more markers of vascular inflammation in mice placed on a “high-fat Western diet.” But nowhere in the article or the accompanying press release do the authors disclose the type of fat fed to the mice.

After an email query, Neil Weintraub, the principal study author, provided us with the feeding formula they used—the fat used was indeed an animal fat, what the industry calls anhydrous milk fat; that is, butterfat with most of the moisture removed. The other main components of the formula were casein (20 percent by weight), sucrose (34 percent by weight) and corn starch (15 percent by weight)—all problematic ingredients that could have contributed to inflammation. As there was no control group fed the same formula but with polyunsaturated oil instead of anhydrous milk fat, the researchers could make no comparison of the effects of mostly saturated versus mostly polyunsaturated fatty acids.

And anhydrous milk fat may not have the same fatty acid profile as butter. The industry has figured out how to add polyunsaturated fatty acids to milk fat through enzymatic interesterification.

Weintraub believes that his results prove that “high-fat diets” can predispose individuals to heart disease even if they do not have high cholesterol levels. “. . . many patients who consume high fat diets do not exhibit abnormal lipid profiles but still develop atherosclerosis nonetheless. These new findings suggest a direct link between poor dietary habits and inflammation of blood vessels. . .”

The study was again funded by the National Institutes of Health, which preaches that “poor dietary habits” mean consumption of foods like meat, butter and cheese, high in saturated fat.

WATCHING CLOSELY

Why would the industry be concerned about a small group of people returning to butter, lard and other real foods? Because even small changes in consumption patterns can wreak havoc in an industry geared to foods based on vegetable oils. And the industry knows that small trends soon become big trends.

And the industry is watching carefully. A

It would be surprising if saturated fats caused liver problems in experiments like these because for sixty years, research has shown that saturated fats protect the liver.

February, 2009 article published in the *Journal of the American Dietetic Association* (109(2):288-96) entitled “Americans’ awareness, knowledge, and behaviors regarding fats: 2006-2007,” looked at consumer awareness and understanding of *trans* and other fats. The researchers found that during the study period awareness of *trans* fats had increased to the same level as awareness of saturated fat (92 and 93 percent respectively). But knowledge of food sources of *trans* fats remained low. Only 21 percent could name three food sources of *trans* fats in 2007, compared to 30 percent who could name three food sources of saturated fat.

Of course the industry would like for consumers to remain ignorant about which foods contain *trans* fats. Saturated fats are likely to be highly visible as butter, cream or fat on meat,

whereas *trans* fats are hidden in the batter, dough and crust of chicken nuggets, cookies, crackers, chips and other junk foods. The current campaign to warn the public about *trans* fats always mentions saturated fats as a threat in the same breath, and since consumers recognize saturated fat much more easily than *trans* fat, the warnings about unhealthy *trans* fats often result in avoidance of healthy saturated fats.

Likewise, articles implicating “high-fat diets,” such as the one appearing in *Circulation Research*, also have the effect of scaring people away from visible butter and meat fats while encouraging the continued consumption of invisible fats and oils in processed and fried foods. And many people will assume that liquid oils are fine—after all, they are not usually referred to as fats. Since people know what saturated fats do to the pipes under the kitchen sink, they are likely to fall for the simplistic argument that saturated fats do the same thing in the human body—never mind the fact that your body is at least twenty-five degrees warmer than those fat-clogged pipes.

The vegetable oil industry and its cohorts in the scientific community choose their words and images carefully! ☺☺

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Ask the Doctor

A TREATMENT FOR HERPES

By Thomas S. Cowan, MD

Question: *What advice can you give me about herpes infection? According to conventional websites, “there is no treatment that can cure herpes, but antiviral medications can shorten and prevent outbreaks during the period of time the person takes the medication.” Since it can be sexually transmitted, abstinence or “safe sex” practices are recommended. I don’t like the idea of taking antiviral medications on a permanent basis and the abstinence part doesn’t appeal to me either. Is there a natural therapy that can get rid of herpes for good?*

Answer: “Herpes” is among the ten medical conditions most frequently searched for on the Internet. You would think that with so much interest in the condition, the medical “experts” would have more to offer than antiviral medications with their side effects of nausea, vomiting, diarrhea, headaches, dizziness, rash and decreased kidney function.

The virus herpes simplex that is so common today manifests in two forms, herpes simplex type 1, which is associated with mouth sores, and herpes simplex type 2, which is associated with sores or lesions in the genital area. This distinction is not absolute as it seems that in some cases herpes simplex type 1 can also be associated with sores in the genital area. There are many other types of herpes viruses that cause disease in humans, including the variety that causes chicken pox and its associated condition shingles.

Herpes viruses tend to be contagious, especially the varieties that cause chicken pox and genital lesions. They are encapsulated viruses, meaning they have a lipid or fatty capsule around their DNA, and they tend to have a chronic form that affects the nervous system. In chicken pox, this means that after the original illness of chicken pox is resolved, the herpes virus is still

present and dormant in the nerve roots. At some point, possibly due to stress or other factors, the virus becomes active and “erupts” as the painful lesions of shingles in the distribution of the affected nerve. Similarly with genital or oral herpes, after the initial, painful infection has cleared, the virus remains in the roots of the nerves to erupt again on the skin under certain conditions.

The symptoms of genital herpes are painful sores in the genital region, which at times can become crusty and infected. Some people experience only one episode; in others episodes manifest several times over a lifespan; some, however, experience painful eruptions every few weeks. It is for these people that this article is mainly directed, those for whom longterm use of conventional anti-viral treatments can result in very unpleasant side effects.

The only other point I would like to mention before discussing some possible treatments is the fact that genital and oral herpes are both transmissible illnesses. In fact, they both can be transferred even if the virus is completely dormant in the person carrying the virus. This is truly an inconvenient truth, in that it means that sexual contact can pass the virus on even if the infected partner has no outward signs of illness. Transmission is less common when the condition is dormant than if there are clear sores present, but we have well documented cases showing that it can occur. This is why herpes can be so troubling for people, as it has a disruptive effect on their sexuality, even in the absence of outward illness.

Regarding the natural treatment of herpes infection, we can take advantage of the characteristics of the virus to impact its tendency to erupt. Since the virus is essentially a piece of DNA surrounded by a fatty layer, if we target this aspect we can largely “disable” the virus. Luckily, we

Since the virus is essentially a piece of DNA surrounded by a fatty layer, if we target this aspect, we can largely “disable” the virus. Luckily, we have two substances which are known to target this tendency of the virus.

have two substances which are known to target this tendency of the virus.

First, the herb *Hypericum perforatum*, commonly known as St. John's wort, contains a chemical called hypericin. It is hypericin that gives the red color to the oil glands in the leaves, and it is hypericin that selectively targets the lipid capsule of viruses.

For centuries, physicians have valued St. John's wort as a nervine, meaning a medicine that targets the nervous system. Thus practitioners have traditionally used St. John's wort to treat depression and tooth ache. Remember that the nervous system consists largely of cells with fatty coatings, similar to the encapsulated viruses. The plant in its wisdom contains the active chemical hypericin in an oily base, and because oil only dissolves in oil, it penetrates the oily tissues of the body, that is, the nerve cells, where hypericin then dissolves the lipid coating of the virus. I generally prefer Mediherb herbal products because of their potency. The dose is two tablets twice per day, even for the very long term.

The second characteristic takes advantage of the virus-disabling effect of lauric acid, the 12-carbon fatty acid found in breast milk fat and in coconut oil. Thanks to the work of Mary

Enig, readers of this journal are familiar with the anti-microbial benefits of lauric acid and other short- and medium-chain fatty acids found in coconut oil. During digestion, the body breaks triglycerides (three fatty acids joined to a glycerol molecule) into di-glycerides (two fatty acids joined to a glycerol molecule), monoglycerides (one fatty acid joined to a glycerol molecule) and free fatty acids. It is the monoglycerol of lauric acid, called monolaurin, that has the strongest anti-microbial effects.

For years, I counseled my herpes patients to eat as much coconut oil, as they could stomach. However, in the past year, I discovered a product called Lauricidin, which is a concentrate or pure form of monolaurin. One dose of Lauricidin is the equivalent of taking many tablespoons of coconut oil per day, a practice most people find intolerable. I have been consistently impressed with the ability of Lauricidin to suppress herpes outbreaks, not to mention yeast problems like candida (monolaurin is also a potent anti-fungal agent), and allow people to get off their antiviral drugs. It is a safe extract, which can be taken long term. The usual dose to suppress the herpes is about 1/2 to 1 scoop, one to three times per day. It should be swallowed, not chewed, and always taken with some food. The dose should be increased slowly as tolerated and as gauged by its effectiveness.

In addition, we must pay attention to the overall microbial content of our bodies, as we know that good bacteria actually synthesize antiviral substances. For most, this will mean following a nourishing traditional diet containing a variety of lacto-fermented foods; for others a temporary GAPS (Gut and Psychology Syndrome) diet may be needed. The fermented cod liver oil is important at the dose of at least one-half teaspoon per day.

With this regimen most of my patients have been able to avoid both the conventional antiviral drugs and the painful symptoms of genital herpes.



FIRST OHIO CONFERENCE ON RAW MILK

Kudos go to David Augenstein "Auggie" of the "The Journal of Whole Food and Traditional Health" Blog and the Ohio Connections to Whole Food and Nutritional Healing, sponsors of the first Ohio Conference on Raw Milk. The conference covered the health benefits of raw milk, problems with commercial dairy, legal issues, production methods, herdshares, connecting to local sources and the business and marketing/promotion of raw milk and featured lectures from Farm-to-Consumer Legal Defense Fund leadership, D. Gary Cox, Esq. and Tim Wightman.



Betsy Clay, WAPF Chapter Leader; David Augenstein, Co-director of Ohio Connections to Whole Food and Nutritional Healing; D. Gary Cox, Legal Counsel for Farm-to-Consumer Legal Defense Fund; and Tim Wightman, Founding Board Member, Farm-to-Consumer Legal Defense Fund.

Fund members, John and Jackie Stower, share the story of the SWAT team raid on their farm, homeschool and food ministry in LaGrange Ohio last December.

Homeopathy Journal

THYROID AND HOMEOPATHIC IODINE
By Joette Calabrese, HMC, CCH, RSHom (NA)

Margaret was uncommonly dazzling, charismatic and constitutionally unfit for frumpy clothes. Nothing she wore matched exactly, yet it all worked together quite nicely because it was draped on *her* body with *her* patrician sensibilities.

She summered at Martha's Vineyard, her long tan legs attracting onlookers. . . mostly men, but women, too. I can't say in public what the men would think but I'm sure Margaret knew. It gave her permission to flounce her hair incautiously. The result was a kind of male chaos that fell in her wake. She was the sort of woman who reveled in her ever-changing relationships, amending them simply because the challenge was entertaining.

But then, one weekend after a friend's opening in Soho, something snapped. Instead of her usual deftness in her daily routine, she began to experience weariness. It moderated her usual steady vitality with a chronic longing for naps. Before long, she also recognized that her easy confidence and flippant air had dwindled and was being replaced by a diminished, subdued version of her old self. And she began to lose more hair than she cared to think about.

At first, her symptoms were mild, but by the time she entered the doctor's office, she was agitated and alarmed. "It feels like I have a chronic touch of the flu, and worse, I've put on twenty pounds." The latter symptom troubled her the most.

The doctor considered hypothyroidism and subsequent tests indicated Margaret's TSH (thyroid stimulating hormone) was indeed low, so he advised a medication. This wouldn't cure her, of course, but it would manage the problem.

Margaret began to question the decision to follow through since the side effects were written in the drug pack she was handed, albeit in print

so small she literally needed a magnifying glass to make out the words. But, it was indeed as clear as day...anxiety, mood swings, hair loss, weight gain, chest pain, irregular heartbeat, shortness of breath, seizures. She already had suffered some of these symptoms and the drug only promised more!

Next Margaret visited a psychiatrist, because of the angst she was experiencing. He too proposed drugs. "No thanks," she thought. She could have submitted without a struggle and simply taken the prescriptions, but that wasn't Margaret's style. In fact, even her best friend asked her, "What's wrong with taking medicine?" "No," Margaret insisted, "I must find a *bona fide* solution."

And so Margaret wore her hair in a sweeping fashion that concealed the loss that honestly only she noticed. She was driven by her innate tenacity to unearth an alternative solution. A colleague who had been relieved of thyroid nodules with a special homeopathic preparation suggested the name of her reputable homeopath. So, Margaret scheduled a phone consultation because the homeopath lived two states away.

After this initial consultation, Margaret was comforted. She was not told her hypothyroid condition would be cured, but the homeopath put it in a different way. "Your body is responding to an imbalance which causes symptoms. We will use the symptoms to determine which homeopathic remedy is best suited to antidote or address your specific imbalance. Once the energy of the illness is met by the energy of the remedy, it will be unnecessary for the body to react. Instead, the reactions to the disease or symptoms will be antidoted."

Margaret was inspired by the word "antidote" and within a week from taking the remedy *Iodum*, her fatigue began to fade. "Is this

Once the energy of the illness is met by the energy of the remedy, it will be unnecessary for the body to react. Instead, the reactions to the disease or symptoms will be antidoted.

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iodine?” she asked the homeopath. The answer she received was fascinating.

The homeopath explained that we know that iodine is key to thyroid health, but to use it in gross form can sometimes be imprudent. Instead, in homeopathic formula, which is greatly diluted according to a specific mathematical procedure, any problems relating to iodine are eliminated, leaving only beneficial results. Since homeopathy is a medical paradigm used the world over, including European hospitals and clinics, and by homeopathic MDs, we have plenty of research to conclude that this method not only has merit, but is safe.

Margaret didn't really care about the studies; her focus was on how well she began to feel. First she noticed that there was no longer a tangled mass on her hair brush. Then, her zeal returned. This happened within the first month of taking the homeopathic preparation. However, the most remarkable restoration was when she observed the pounds slowly melting and the fatigue eliminated.

Symptom by symptom, the disease seemed to dissolve. It was so natural and not unlike the way she felt before being struck with hypothyroid disease. Months later, her thyroid hormone was again measured and the proof was revealed. Her

levels were indeed within the range of normal!

It was about this time that, while at the theatre, she inadvertently ran into Alphonso, a handsome Italian friend from back in grad school. He squeezed her hand and whispered, “Sprezzatura!”

When she got home that night, she paged through her Italian dictionary and was delighted to discover that the beautiful word means “the art of nonchalance in effortless elegance.” Ahhh . . . the confirmation that her life was back.



Joette Calabrese, CCH, RSHom, a certified homeopath with a thriving practice of discerning clients throughout the United States and abroad, is a sought after lecturer, author and frequent radio guest. Ms. Calabrese's signature philosophy maintains that the blessing of health is not bestowed randomly, but can be achieved through the detailed and systematic method of classical homeopathy. Her nearly 25 years of extensive study and practice complement her unique methods of classical homeopathy with the precepts of slow food nutrition. She may be contacted for phone consultations, seminars, and a variety of nutritional and homeopathy CDs at www.homeopathyworks.net 716.941.1045

HOMEOPATHIC REMEDIES FOR THYROID PROBLEMS

The link between iodine and the thyroid gland is well established; therefore, it is no surprise that homeopathic iodine has been used homeopathically for many decades. In its original state, elemental iodine can actually cause thyroid pathology. This is why in the much diluted methods of homeopathic preparation it can instead rouse the body to address the very problem it can sometimes cause. This capacity reveals the very essence of homeopathy, which is ruled by the law “like cures like.”

In the case of Margaret's sufferings, this remedy was chosen because it suited not only her specific symptoms, but her personality as well. What caught the homeopath's attention, in this case, was her uncharacteristic weight gain and subdued behavior that was so unlike her when in health. Since the need for *Iodum* is characterized by these features, it proved to be just the right fit for Margaret.

However, Margaret had a colleague for whom the remedy choice was quite different. A common remedy for thyroid nodules, whether accompanied by hypothyroidism or hyperthyroidism, is *Sepia*. But again, the choice of *Sepia* depends on the entirety of the person suffering the problem. Margaret's colleague had just had a baby when she developed her thyroid issues. This put her in a reproductive state that would need to be considered for the totality of symptoms to match. For example, she too experienced weight gain, but it was accompanied by mood swings and sleeplessness. Since Margaret's hormones were not those of a new mother, *Sepia* would have been unsuitable for her.

A man suffering from hypo- or hyperthyroidism would indeed be subject to the same differentiating criteria, but the hallmark of his sufferings might include chronic perspiration of the head, easy weight gain that was particularly flabby and an overall sluggish disposition. There might also be anxiety and an overwhelmed sensation from his many responsibilities. This would point squarely in the direction of *Calcarea carbonica*, a homeopathic remedy most noted for these symptoms. Thus homeopathy is person-specific, not disease-specific and anything less would be a mediocre, polyester, one-size-fits-all choice. In the quest for authentic health, this will never do.

Food Feature

GLUTEN-FREE SOURDOUGH STARTERS, PANCAKES AND MUFFINS

By Sharon Kane

After a number of years of building Weston A. Price Foundation principles into my daily life I learned I had multiple food sensitivities and had to let go of some beloved foods, namely butter and homemade sourdough rye bread. Unable to find suitable store-bought gluten-free and allergen-free breads I began a journey of culinary discovery that taught me more about gluten-free sourdough baking than I ever could have imagined. Over time I coupled WAPF guidelines with modern gluten-free baking principles and came up with some lovely breads, muffins and pancakes that have become nutrient-dense, highly digestible comfort food for me and my family.

For those who must accommodate similar food sensitivities, I hope the following instructions for producing gluten-free starters will ease the transition to this way of baking. The devil is always in the details, and I have provided advice based on my experiments as I came to devise recipes that were successful.

Let's start with a few definitions:

STARTER: A culture of wild yeast and lactobacilli in a flour-and-water medium used for leavening bread products.

PLAIN STARTER: Simply brown rice flour and water (not as potent or dependable as a boosted starter).

BOOSTED STARTER: Brown rice flour and water boosted with one to two tablespoons of water kefir, dairy kefir, kefir whey or kombucha.

FRESHLY MADE STARTER: A new starter made without any previously fermented starter.

ONGOING STARTER: A small amount of potent starter reserved from every batch and used to ferment the next batch.

RESTING STARTER: Starter stored in a covered

jar in the refrigerator. It needs to be fed every two weeks. To feed, remove from the refrigerator and allow to come to room temperature. Add equal amounts of flour and water. Let ferment for at least four hours and return to refrigerator.

When I first began experimenting, I used plain starters but didn't find them to be potent enough to be dependable. Now I always use a boosted starter. I have found that brown rice flour makes a very dependable and versatile starter and is a good base from which to try variations.

WORKING WITH STARTERS

There are three ways to work with starters:

1. You can use up all your starter each time you cook or bake. You would create a new starter for each time you want to cook. Just allow enough time, usually three to four days, for the starter to be ready.
2. You can have an ongoing starter at room temperature stored on the counter indefinitely, feeding it two to three times a day. You take out what you need for that day's cooking, leaving a small amount for the next batch, feeding it and letting it continue to ferment.
3. You can store some starter in the refrigerator between cooking and baking days. It must be fed every two weeks. Take it out of the refrigerator, let it come to room temperature, feed it with equal amounts of brown rice flour and water. Let it ferment on the counter for four hours. Then put it back in the refrigerator. When you need it take it out, let it come to room temperature and feed it. It will be ready for cooking in one or two days.

If you need a lot of starter you can use one cup flour and one cup water for each feeding. If you need a small amount you can start with one cup flour and one cup water and use smaller

I have found that brown rice flour makes a very dependable and versatile starter and is a good base from which to try variations.

amounts, such as one quarter or one third cup flour and water each for subsequent feeding.

If you miss a feeding check to see whether the starter seems less potent or too acidic. If it's less potent it may still be just fine for pancakes. If it's too acidic, the finished products may be unpleasantly sour. It may be best to discard it and start over.

I find the best starter consistency is not too soupy and not too thick. Using roughly equal amounts of flour and water with a little less water than flour, gives a nice balance. If the starter is very soupy right before cooking you can use just flour and no water for the last feeding or two. If right before cooking the texture seems too thick you can always add a little water, a tablespoon at a time, whisking as you go until you get the right consistency.

VISIBLE STAGES OF A NEW GLUTEN-FREE STARTER

These stages are approximations of the actual time. The stages may take a total of two to four days depending on season, climate and temperature of kitchen.

DAY 1: Mix flour and water. Sometimes solid sinks to the bottom, liquid stays on top. This is okay.

DAY 2: Small bubbles come up when the starter is moved or stirred.

DAY 3: "Hill stage." The solid part forms a soft hill at the top of the water level (this stage doesn't always happen).

DAY 4: Bubbles of different sizes come up when the starter is moved or stirred. Sometimes there is a hissing or burbling sound when they come

from the bottom of the bowl. Sometimes the starter will become spongy like a wheat or rye starter, but is almost always a viable starter even if it doesn't produce this effect.

BOOSTED BROWN RICE STARTER

Start with one cup brown rice flour and put it in a ceramic or glass bowl. Pour in slightly less than one cup water and whisk smooth. Add one to two tablespoons of water kefir, dairy kefir, kefir whey or kombucha and whisk again. Cover with a cloth or paper towel and secure with a rubber band. Leave it on the counter away from drafts or extreme temperatures.

Feed the starter every eight to twelve hours, or two to three times a day, for a total of four days, with nearly equal amounts of rice flour and water, a bit less on the water, whisking smooth each time and covering.

After two days put the starter in a clean bowl and continue feeding. (Change the bowl so that the dried out starter that clings to the sides of the bowl stays out of the living starter.) After about forty-eight hours the starter should show signs of viability. If you don't see any bubbles or "hilling" you can add another tablespoon of water kefir, dairy kefir, kefir whey or kombucha.

By the third day you should see small bubbles, especially while stirring. By the fourth day

GLUTEN-FREE SOURDOUGH PANCAKES: BASIC RECIPE

These gluten-free pancakes are different from most people's experience of regular pancakes. It's important to keep an open mind about what this particular food tastes and feels like rather than comparing it to wheat pancakes. These pancakes are nutrient dense and very satisfying. They can be used for sweet as well as savory meals. With a little practice one can master the subtleties of working with this gluten-free starter.

For pancakes, prior to cooking, use 1/2 cup of buckwheat or gluten-free oat flour for the last feeding. A pure rice flour starter tends to be on the thin, soupy side add buckwheat or oat flour; this will give the pancakes some needed density. For four pancakes:

1 cup mature brown rice flour sourdough starter (in the bubbling stage)

1 tablespoon oil, melted butter or fat

large pinch of salt

1-2 tablespoons freshly ground flax seed (grind in a coffee grinder dedicated to this purpose)

Mix oil, salt and ground flax seed into starter and let sit for at least fifteen minutes to allow the flax to thicken the batter. The batter should be like a thick cake batter. If the batter is too thick whisk in a little water, one tablespoon at a time, until you get the desired consistency. (The batter can also sit for up to 24 hours in the refrigerator. The finished pancakes will be thinner and lighter.)

Grease the pan or griddle and heat to fairly hot. Spoon or ladle out the batter onto the pan. These pancakes will take longer to cook than wheat pancakes so flip well after bubbles show up or the edges start to dry out. Cook another one to two minutes and serve.

You can also cool the pancakes on a rack and refrigerate them in a covered container for three to five days. Just reheat them in the toaster.

you may see bubbles of different sizes and there may be a hissing, burbling sound when they rise from the bottom of the bowl.

It should take about four days for a new starter to be ready for cooking. It may take less time in warm weather and more in cold weather. With a little practice you will get to know when your starter is ready. If you want ongoing starter, when you're ready to cook or bake, remove a small amount (1/4 to 1/2 cup) and put it in a clean bowl. Feed with roughly equal amounts of flour and water and whisk smooth. Cover and set aside to continue fermenting. This will be your

starter for your next batch. Proceed with your recipe using the remaining starter.

Using my guidelines to get you started, I hope you and your family will soon be enjoying nutritious, satisfying and easily digested gluten-free baked goods. You'll soon discover that there are many variations that you can use to tempt your family. Happy baking and good health! ☺☺

Sharon A. Kane has successfully used food to recover from multiple illnesses. She developed the Food As Medicine workshop series to share her discoveries. She offers hands-on classes and phone consultations in fermented foods and gluten-free, dairy-free cooking and baking. Sharon's new book, The Art of Gluten Free Sourdough Baking, can be purchased in PDF format from www.food-medicine.com. Contact Sharon at (508)881-5678 or Gpath2003@yahoo.com.

GLUTEN-FREE PANCAKE BREADS

With a few changes in the recipe, the gluten-free pancakes may be used as bread for sandwiches. Begin with three to four cups of starter. Add a little water to the batter for a thin batter and make large pancakes, five to six inches in diameter. Store them in a container in the refrigerator, and toast them before using as bread in sandwiches.

You may spice up basic pancakes with these suggested additions to the batter:

Cinnamon	Pumpkin pie spice
Garam masala	Ground hot pepper
Chopped apple	Berries
Chopped or sautéed onion	Ground sesame seed

You can use different flours in the starter as it grows or you can use a different variety of flour for the last feeding. Each type of flour brings a different quality to the finished product: teff flour (grind in a coffee grinder) thickens it and gives it weight; sorghum flour fluffs it up; amaranth flour (grind in a coffee grinder) lightens the batter and gives it a nutty taste; gluten-free oat flour lightens and fluffs it; buckwheat thickens it almost to a cake-like consistency, and makes a very substantial pancake.

Note that buckwheat flour is so dense that fermentation bubbles may not move through the starter easily. It will nevertheless be alive and potent. Because of their density, buckwheat pancakes may not show bubbles in the pan so look for darkening around the outer third and then flip them.

Another variation: Use leftover cooking water from boiled potatoes (including any starch or potato bits on the bottom of the pot) for the water portion of the starter. This produces an excellent starter giving a wonderful potato pancake taste. Try it cooked with chicken or duck fat and topped with chopped liver or liver pâté.

SPICE MUFFINS

4 cups boosted brown rice starter	1/2 cup sweet rice flour
1/2 cup buckwheat flour	1/2 cup amaranth flour
1/2 cup gluten-free oat flour or arrowroot flour	1/2 teaspoon salt
1/2 teaspoon stevia powder or 1 teaspoon crushed stevia leaf	2 teaspoons cinnamon
1 teaspoon nutmeg	1/2 teaspoon ground cloves
1/4 cup ground flaxseed	1/4 cup expeller expressed sunflower oil

Place flours, salt, stevia and spices in a bowl and whisk together. Put starter, ground flaxseed and oil in mixer bowl and mix gently. Add flours to starter mixture and mix on low speed for 15-30 seconds until spongy. Do not overmix. Fill greased muffin tins half full. Let rise for 8 hours. Bake at 375 for 15 minutes. Let cool for 5-10 minutes and remove muffins to rack. When completely cool, refrigerate, wrapped in a cloth in a plastic container. The muffins freeze very well and are great toasted after freezing. Yield: 12 muffins or 24 mini muffins.

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The Vegetarian Myth: Food, Justice, and Sustainability

By Lierre Keith
Flashpoint Press/PM Press, 2009

Lierre Keith spent almost twenty years as a dedicated vegan, “succumbing to weakness” by eating fatty dairy products only on rare occasions. Her book is a moving account of how that diet destroyed her body and how she came to realize that vegetarianism was not the answer to the problems of environmental destruction, animal suffering or Third World starvation.

She did not come to this knowledge easily. Despite her catastrophically failing health, she was certain it could not be due to her diet. Didn’t everyone know that animal foods with their saturated fat and cholesterol, not to mention their growth hormones and antibiotics, were the cause of all our modern health woes? And wasn’t it obvious that CAFOs (Confinement Animal Feeding Operations) and slaughterhouses are institutions of torture, as well as environmental disasters, that the grain and water used for animals should feed the starving masses instead? Wasn’t it morally wrong to kill a sentient creature for food, when it was clearly unnecessary?

So she dragged her weary body through each day, her life a testament to her desperate, noble commitment to life, justice and compassion. As she struggled to find answers to her deteriorating health, she also took another step along her path as an environmentalist and began trying to grow her own food. As she puts it, these two quests led her to an adult knowledge of the world that she had never learned before. It’s that knowledge that she shares in her beautifully written book, which is organized into three main sections addressing moral vegetarians (those who are vegetarian because they believe that killing/oppressing animals is wrong), political vegetarians (those who believe that the grain fed to animals

should feed starving humans), and nutritional vegetarians (those who believe that animal food is detrimental to human health). These chapters are bookended by an introduction (“Why This Book?”) and a conclusion (“To Save the World”).

MORAL VEGETARIANS

In addressing the argument that it is wrong to kill animals for food, or even to oppress them for their milk or eggs, Keith makes it clear that she is in no way excusing the horrors of factory farming. But there are humane ways to raise animals for food. And what’s more, just because there is no dead animal on your dinner plate doesn’t mean many animals (and birds, insects, microbes, prairies, rivers) didn’t die so that you could have that plate of rice, beans and tofu. The worldwide expansion of grain-based agriculture has destroyed ecosystems, drained wetlands, caused extinctions, killed the life in the soil. Several hundred small animals die in or under the machinery every time a field of grain is harvested. And insects, and bacteria, and the plants themselves. Death is inherent in every bite of food that keeps each of us alive.

As Keith tried to raise her own food, she became aware of and involved in nature and its cycles, and learned that plants eat, and that what they eat is animals—whether in the form of fossil-fuel-derived fertilizers or today’s blood and bones. The soil eats too, a million tiny organisms in every spoonful of topsoil, all doing the producing and degrading that make life possible for the rest of us. The insects needed to eat, and if she was to rescue any of her vegetables from them, she had a choice between chemicals and birds. Could she bear to “exploit” some chickens, even if she didn’t eat them in the end, by putting them to work eating bugs in her garden? Would she personally be culpable for the death of those insects, having put the chickens in proximity to

Despite her catastrophically failing health, she was certain it could not be due to her diet. Didn’t everyone know that animal foods with their saturated fat and cholesterol, not to mention their growth hormones and antibiotics, were the cause of all our modern health woes?

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them herself? Adult knowledge dawned in her, that “predators” and “prey” could apply equally to all life forms, depending on when. All life forms fit into a circle of producers, consumers and degraders. We all need to eat and in the end we all need to be eaten.

POLITICAL VEGETARIANS

Political vegetarians argue that it’s unethical to wastefully feed animals tons of grain that could feed hungry humans throughout developing nations. Keith exposes the ignorance of this argument on several counts. First, we shouldn’t be feeding animals grain in feedlots; they should be eating grass on pasture and returning nutrients in the form of urine and manure to build the soil. Second, much of the world isn’t suitable for intensive grain cultivation and we’ve almost tapped out the topsoil in the places that are suitable. Even with increasing crop yields, we’ll run out of oil to make synthetic fertilizer and transport the grain around the world. Third, a grain-based diet will only keep these people malnourished (see the “Nutritional Vegetarians” chapter).

Finally, the argument about human starvation is simply a smoke screen for Big Ag. Hungry nations don’t need our food aid; they need us to stop the subsidized exports and strong arm trade negotiation tactics that demolished their native food systems and caused the starvation in the first place. Monsanto, Cargill, ConAgra, Archer Daniels Midland—these are the companies that give us GMO corn and soybeans, promote junk food dressed up as “nutraceuticals,” and set grain prices below the cost of production—and which, with the oil companies and other big businesses, own almost all the small organic labels (Hain, Cascadian Farms, Muir Glen, etc.), too. They’re happy to take more money selling organic food to well-meaning yuppies while simultaneously doing all they can to erode organic standards so they can produce more cheaply yet still command

a premium price. They do not have the well-being of the world’s hungry foremost in their mind, despite disingenuous “corporate pledges” that claim otherwise (see monsanto.com, cargill.com, and adm.com for some truly outrageous rhetoric about their “values,” which are in complete opposition to their behavior).

Monsanto is buying up seed companies and patenting every seed it can, thus stealing for their own intellectual property the work of generations of farmers worldwide over the centuries. They sue poor farmers who try to save patented seed from year to year. Do we really think it’s a good idea to make the entire world dependent on a handful of plants owned by a handful of utterly ruthless companies?

NUTRITIONAL VEGETARIANS

This chapter will be thoroughly familiar to regular readers of this journal. Keith learned through hard experience that her animal body needed the food it evolved to eat. Nutrient-dense animal foods rich in complete protein, saturated fat, cholesterol, fat-soluble vitamins, and minerals allowed our brains to increase in size while our digestive tracts shrank millions of years before we domesticated grains. We are no longer vegetarian primates like the gorillas.

Keith also discusses the damage the grains wreak throughout our bodies. Their opioids addict us and so we keep pulling down whole ecosystems to spread them, but their sugars, starches, lectins, phytates, enzyme inhibitors and phytoestrogens cause blood sugar swings, insulin resistance, gut and joint inflammation, autoimmune diseases, mineral deficiencies, digestive disorders, hormonal disruptions and many more medical problems. As other researchers and writers have shown, the last century’s exponential increase in consumption of modern agribusiness’s refined carbohydrates, manufactured fats, and isolated plant proteins coupled

The argument about human starvation is simply a smoke screen for Big Ag.

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with the decrease in consumption of traditional nutrient-dense foods, is responsible for most of the chronic illness that plagues us today.

TO SAVE THE WORLD?

If I have any major criticism of this book, it's that the final chapter is pretty grim. And yet, I can't even really fault her for that. Keith has done her research, crunched the numbers, and thinks that the planet can't truly sustain even one tenth of our current numbers for the long term. Many will bristle at her first recommendation: "Don't have children." But as she points out, a large portion of humanity wouldn't be around today if it weren't for the Green Revolution, which accelerated the loss of our topsoil and the destruction of ecosystems even as it provided a starvation diet for billions more humans (with the profits going to a very few corporations). If we don't decrease our numbers voluntarily, and soon, we may see them decrease rapidly and involuntarily through starvation, environmental collapse and warring over the last of our resources.

Keith seamlessly weaves arguments against grain agriculture with indictments of patriarchy, religion and the cult of masculinity. Many of these themes will unsettle or turn off readers who otherwise agree with her main points against vegetarianism. But she persuasively links the spread of agriculture to the spread of slavery, imperialism, militarism, and class divisions—on the whole, the agricultural experiment has meant a net loss in freedom and individual rights.

I don't know whether she's right about how truly desperate the situation is. But even if reality will not be quite so grim as she paints it, to mitigate the danger we must increase our vigilance and our activism in pursuit of grass-farming, not grain-farming. And we must be ever more active and vocal in politics and in the protection of individual rights. If global food crises do come when petroleum-based ag fails, can we imagine that governments under pressure wouldn't seize the remaining fertile land from the grass-farmers, "for the public good"?

Keith's bibliography is filled with names that will be familiar to readers of this journal: Daniel (mistakenly identified as Kaayla "Davis" throughout the book, an error that Keith will rectify in future editions), Eades, Enig, Fallon, Price, Purdey, Ross, Salatin, Schmid, Taubes. But don't think that if you've read all of these authors and you're eating meat that you have nothing to learn from this book. Keith will also introduce you to some fascinating voices you may not yet know: I've already ordered my copies of Derrick Jensen's *Endgame* and Stephen Buhner's *The Lost Language of Plants*.

Part of the brilliance of her book is its astonishing readability; the grace and ease with which she weaves lay-reader-friendly scientific explanations about plant chemistry and nutrition with heartbreaking narrative about her

personal journey. And I was astonished at how much I learned about life cycles, soil, plants, animals, wetlands and politics (the nutrition I already knew) in a mere 274 pages of seamlessly flowing text. Keith bares her soul for us. . . a soul that aches for so much we've already lost. I wept at several points, not only on my first read through, but again on my second. Her book is a plaintive cry for us to wake up from the fantasy of endless consumption and entitlement that we've been playing out for far too long, and from the pernicious corollary that if we just recycle and "buy organic" and replace our incandescent bulbs with compact fluorescents that it will all be okay.

The Vegetarian Myth is an eloquent and utterly persuasive argument against vegetarianism. Keith pulls no punches, but she does address vegetarians with empathy and love. She has been there; she knows the prayer in the vegan heart. Few vegans truly stick it out for twenty years, so Keith has earned her soapbox. And she realizes that for those who have built an entire identity around their diet, all three of the main vegetarian arguments must be thoroughly dealt with before another way can be considered. Mass vegetarianism would not save the world, but in fact would hasten its destruction.

I hope that this book will help vegetarians and vegans who are struggling to maintain their diet despite its effect on their health, to see that while their compassion and fervor for justice are honorable and noble, they are mistaken about the solution. I would love to welcome more recovering vegetarians and vegans into WAPF. Together perhaps our combined commitment and creativity can find the path to a truly sustainable, well-nourished future for humans and all our fellow creatures.

You may read an excerpt and order the book at lierrekeith.com/vegmyth.htm.

Review by Jill Nienhiser

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Fertility, Cycles and Nutrition: Self Care for Improved Cycles and Fertility. . . Naturally!
Marilyn M. Shannon
The Couple to Couple League International

Marilyn Shannon takes on the task of helping women (and men) improve their reproductive health by offering, as her first suggestion, “Eat plenty of whole plant foods: grains, beans, nuts, vegetables, seeds and fruits.” Never mind the fact that this kind of diet has caused reproductive problems in a whole generation of educated health food enthusiasts. Shannon gives lip service to animal protein, milk, eggs and butter, and warns against refined sweeteners, soft drinks, caffeine, margarine, shortening and soy foods, but falls far short of advocating the kind of diet that can bestow fertility on the infertile, and good health on women suffering from hormonal problems. Cold breakfast cereals, microwaved food, pasta, vegetarian diets, lots of goitrogenic raw vegetables and millet, canola oil and yeasted whole wheat bread with added gluten are all fine with Shannon, while she offers nary a mention of the nutrient-dense foods so vital for good health—raw milk, organ meats, grass-fed animal products, cod liver oil, nourishing broths, lacto-fermented foods and properly prepared whole grains. Instead she recommends a ton of supplements.

The overall impression of this book is one of confusion. For example, Shannon recommends fish liver oil, not for vitamins A and D, but for essential fatty acids. Later she states that “true vitamin A from fish oil helps the thyroid gland.” But there is little if any vitamin A in fish oil—only in fish *liver* oil. If oatmeal causes digestive problems, Shannon recommends yogurt or a product called Beano, not overnight soaking. She dedicates a section of her book to yeast overgrowth seemingly oblivious to the role played by improperly prepared whole grains in feeding yeast infections. An although she al-

ludes to the importance of zinc for male fertility, thyroid health and prevention of birth defects, she doesn’t mention the fact that all those whole grains she recommends block zinc uptake. Red meat and shellfish, the best sources of zinc, are not listed in her “foods to emphasize.” Does Shannon recommend lowfat or fullfat milk? We only find out on page 71 that she “favors” whole-fat dairy products over low-fat ones. (Raw milk is not even considered.) Shannon seems to think that flax oil is the cure for everything, but soy oil (loaded with rancid omega-3 fatty acids) is also fine because “for many people, soy oil in salad dressings is unfortunately the only source of omega-3 essential fatty acids. . .”

Shannon applies these contradictory and sketchy dietary principles to a list of reproductive problems—PMS, heavy periods, endometriosis, infertility, thyroid problems, PCOS—each with a slight tweak of the supplement regime. While avoiding sugar, sodas, soy foods and margarine will certainly help men and women improve their reproductive health, the other side of the equation—replacing these so-called foods with nutrient-dense superfoods—seems to have gone over Shannon’s head. Maybe this is because she relies heavily on the dietary advice of supplement pushers Guy Abraham and Julian Whitaker and plant-based diet-advocate Jorge Chavarro.

In a book full of weaknesses, the section on birth defects is the weakest of all. For Shannon, folic acid is the knight in shining armor for birth defect prevention—to take in supplement form. No mention of vitamins A, D and K, no emphasis at all on the importance of child spacing. In fact, Shannon counsels one woman in her 40s who already has many children to do whatever possible to have more children in spite of recent miscarriages—a sure message that it’s time to stop having children.

A big thumbs down for this confusing, sloppy, contradictory book.

Review by Sally Fallon



The overall impression of this book is one of confusion.

All Thumbs Book Reviews



***Deceptively Delicious:
Simple Secrets to Get
Your Kids Eating Good Food***
By Jessica Seinfeld
Collins Living, 2008

As an avid cookbook reader and cook, I was excited to receive a copy of *Deceptively Delicious* by Jessica Seinfeld as a gift. The cookbook contains numerous “kid-friendly” home-style recipes using various hidden fruits and vegetables to “enhance the nutrition.” Unfortunately this book is yet another case of a well-meaning celebrity wife and mother perpetuating the low-fat nutrition dogma.

In the book’s foreword, Drs. Roxana Mehran and Mehmet Oz blame heart disease and diabetes on “too much starch, sugar and saturated fat.” I read on, expecting the recipes to limit all three of these ingredients. What I found is a collection of recipes that almost completely avoid saturated fat but still use plenty of flour (both white and whole wheat) and refined sugar. Given my knowledge of nutrition (based on personal experience, several years of research and the advice of the Weston A. Price Foundation), I would much rather see recipes for children that use more saturated fat while reducing the starch and sugars.

Deceptively Delicious is designed to resemble an old-fashioned cookbook so I expected plenty of “from scratch” recipes using real ingredients. Hiding vegetables in food is nothing new. I imagine that mothers have been fortifying their children’s foods in this way for as long as we have had graters and blenders. (My own great grandmother was famous for her zucchini cookies.) Many of the foods that Jessica Seinfeld promotes in her cookbook, however, are very new to the human race. I was not surprised but definitely disappointed to find that she uses lowfat dairy products, tofu, cold cereal and lean meats. I was more alarmed to find that she wants

us to bake with canola oil, vegetable oil, nonstick cooking spray and “trans-fat-free” tub margarine spread. Not only are these ingredients highly processed, but they are also high in omega-6 fats and dangerously rancid when heated. And this is a cookbook of recipes for our children!

It saddens me that this cookbook is flying off the shelves. Thousands of loving mothers think that they are doing a good thing just because they are getting their children to eat hidden vegetables.

There are serious flaws in nearly all of the recipes. Let’s start with the eggs. Nearly every recipe that uses eggs calls for throwing out most or all of the yolks. Someone needs to let Mrs. Seinfeld know that the yolks are the most nutrient-dense part of any egg. Adding a half cup of puréed carrots or squash will add some fiber to a recipe but will never make up for the fat-soluble nutrients, including true vitamin A, that are lost when you discard the egg yolks. Using nonfat yogurt and *trans*-free soft spread instead of butter in the same recipe will ensure that your unsuspecting children will lack the essential saturated fats and nutrients they need to convert the beta-carotene in those puréed carrots to usable vitamin A.

From breakfasts to desserts, this cookbook gives us a surplus of carbohydrates and lean proteins while neglecting the important fats and fat-soluble vitamins that every child needs. For example, the pumpkin oatmeal recipe uses skim milk and a full quarter cup of brown sugar for two servings. Mrs. Seinfeld then suggests serving the sugar-laced oatmeal with dried fruit and nuts and maple syrup. In my own kitchen, I made the recipe using well-soaked oats, whole milk and a quarter cup of butter instead of the brown sugar. With the pumpkin purée and pumpkin pie spices it was still very sweet to my taste.

If the sugar-rich breakfasts and baked goods are making you crave some protein, be

Someone needs to let Mrs. Seinfeld know that the yolks are the most nutrient-dense part of any egg.

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very careful of the entrées. They are loaded with improperly prepared whole grains, lowfat or nonfat dairy products and lean meats. We know that too much protein without the fat and fat-soluble activators will deplete our livers of vitamin A. Too much beta carotene, which you might get from all the puréed veggies hidden in these dishes, can depress our ability to convert carotenes into vitamin A.

Many of the recipes are baked substitutes for fried foods. Some of them would be just fine if they called for more heat-stable fats such as lard. Of course, they all use nonstick cooking spray. I don't even want to go near the Tofu Nuggets. Mrs. Seinfeld claims the kids think they are chicken or cheese. Let's just feed them some chicken or cheese then. They certainly aren't getting what they need from all that soy. The Spaghetti Pie and Lasagna recipes don't even look very appetizing, though I think they could be very good if made with full-fat dairy products and meats.

That said, I do find myself using *Deceptively Delicious* for ideas. If you are someone like me, who follows recipes very loosely, this is a serviceable cookbook. The recipes that I have converted to use full fat dairy products and real food ingredients have all turned out very well.

Just ignore the appalling advice to throw away those precious egg yolks and use plenty of high quality animal fat. Avoid the high sugar desserts and the tofu nuggets. I also want to caution you against the advice to prepare several steamed vegetable purées ahead of time. According to the Weston A. Price Foundation, nitrites can form in cooked vegetables during storage. This adds yet another danger to our so-called healthy cooking.

I do believe that Jessica Seinfeld has her heart in the right place. She offers parenting advice throughout the cookbook. One of her advice pages tells us to keep a strict schedule of meal times and snacks to avoid mood swings in our children. While regular mealtimes and snacks are important, mood swings are not a problem if our children have plentiful saturated fat and fat-soluble vitamins in their diets to prevent hypoglycemia. I also can't help commenting on the photo of her youngest on the back cover. He has his mouth open wide, displaying his narrow palate and crowded front teeth. Jessica herself looks model-thin and pale. I want to take them both home and feed them a traditional foods supper. I may even hide some puréed liver in the main course. ☺☺ Review by Stephanie Brewer

We know that too much protein without the fat and fat soluble activators will deplete our livers of vitamin A.

The Sunlight Solution: Why More Sun Exposure and Vitamin D are Essential to Your Health

By Laurie Winn Carlson

Prometheus Books

The Sunlight Solution puts forward the radical idea that God didn't put the sun up there to kill us all. It might even be good for us. The link with vitamin D is well known and our health is also very dependent on good circadian rhythms and properly regulated melatonin levels. The author also points out that melanoma occurs more often in people who don't get much sun, and in areas where the sun rarely or never shines. This is all good information.

For those who may feel inspired to write a book that covers the subject of vitamin A and D, I have some advice. Read what our website says on the subject first, especially articles written by Chris Masterjohn, and you will stand a better chance of dodging my downward pointing thumb. The author apparently didn't do that. We are told again that cod liver oil may be a problem because it has a lot of vitamin A which interferes with vitamin D. See the Spring, 2009 *Wise Traditions* to straighten out that confusion. There is good information in this book but look out for landmines. A reluctant Thumbs Down.

Review by Tim Boyd

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***The Jungle Effect:
Healthiest Diets from Around the World—
Why They Work and
How to Make Them Work for You***
By Daphne Miller, MD
HarperCollins Publishers, 2009

The Jungle Effect focuses on so-called “cold spots” in the world, where incidences of particular diseases are significantly lower than average. Already, the basic approach makes me suspicious. A tunnel vision focus on one or two medical conditions while ignoring the bigger picture is a popular approach that can lead to trouble.


The first cold spot visited is Copper Canyon, Mexico, where diabetes is fairly rare due to the prevalence of slow-release carbohydrate foods. Copper Canyon residents consume some, but not a lot of animal-based foods. Their overall health is not clearly described beyond their very low rate of diabetes. About all we learn from the description is that eating foods that spike your insulin levels is bad for your health—something I think most people already know. Skipping ahead, other cold spots are Iceland (cold in more ways than one), Cameroon and Okinawa.

The second locale covered in *The Jungle Effect* is Crete, which is a cold spot for heart disease. Miller credits this protection to olive oil, but not to the fatty lamb and rich goat cheese that forms the basis of their diet.

We are only a few pages into the description of this cold spot when we start hearing about the Seven Countries Study by none other than Ancel “cherry-picker” Keys. The author presents this study as though it is a landmark breakthrough in nutrition understanding. I would use other words such as landmine and breakdown. Dr. Keys (cherry) picked seven countries. The ones with the highest saturated fat consumption had the highest rate of heart disease, whereas countries

with the lowest saturated fat consumption had the least heart disease. Keys drew this all out on a nice, neat graph. This might be quite convincing if he hadn’t ignored data from over a dozen other countries. When those data are added to his graph, the nice, neat line turns to limp spaghetti, completely demolishing his theory. With studies like that, who needs science? Needless to say, the author completely lost me right there.

More politically correct inaccuracies: people in Cameroon don’t get colon cancer because they don’t eat a lot of saturated fat, (but all that millet, sorghum, maize, plantain and rice they eat gets turned into saturated fat—Miller says they eat brown rice in Cameroon, but I guarantee you, it is white rice); Icelanders don’t get depressed because they get a lot of omega-3 fatty acids from fish, and also from lamb and dairy foods since the animals eat moss (they also get a lot of vitamin A from cod liver oil, but Miller says too much vitamin A is bad for us); Okinawans avoid breast and prostate cancer by eating lots of fruits and vegetables, seaweed and getting plenty of selenium (no mention of the fact that they cook, or at least used to cook, in lard).

Even though Daphne Miller has at least heard of Weston Price and the Weston A. Price Foundation and mentions both favorably, she either is not extremely familiar or is not on board with WAPF dietary principles. There is more saturated fat bashing scattered through the book. Miller does allow for some animal-based food in healthy diets, but it is lowfat and kept to a minimum. My big, fat thumb is down for this one. 

Review by Tim Boyd

Miller does allow for some animal-based food in healthy diets, but it is lowfat and kept to a minimum.

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Our Daily Meds: How the Pharmaceutical Companies Transformed Themselves into Slick Marketing Machines and Hooked the Nation on Prescription Drugs

By Melody Petersen

Farrar, Straus and Giroux, 2008

One way to assess the current state of health care in the United States is to look back just a couple of decades to world longevity statistics. A sixty-five-year-old American woman in 1980 could expect to enjoy a longer life span than could her contemporary in most other places in the world. By 2002, however, a sixty-five-year-old woman, with access to the nearly unlimited supply of the newest and most expensive drugs the American pharmaceutical industry has to offer, had slipped from her comfortable spot in expected life expectancy. Among longevity spans determined for thirty countries in that year, the American woman would come in seventeenth. American men have fared even worse, and a sixty-five-year-old American man today can expect a shorter life than a man his age in Mexico.

Melody Petersen presents these statistics in *Our Daily Meds* as one means of examining the purported value of the flood of prescription medicines engulfing the American public. No one can seem to account for the dismal showing of Americans in international longevity comparisons, she points out, even though the United States spends more per person on medical care than any other nation on earth. How much more? More than do all the people of Japan, Germany, France, Italy, Spain, the United Kingdom, Australia, New Zealand, Canada, Mexico, Brazil and Argentina combined. In 2005, that was an average of \$6,700 for each person per year; \$26,800 for a household of four. More money than was spent on housing, food, transportation, or anything else.

Petersen pounds home the personal, individual cost of medical care because once she begins to report on the profits of the pharmaceutical industry, the numbers soon reach proportions that can no longer easily be held in one's head. In 1980, Americans spent \$12 billion on prescription drugs. By 2003 that figure had risen to \$197 billion. In the same time period Americans had doubled what they paid for cars, and tripled what they paid for clothing, but their spending on pharmaceuticals had increased seventeen times.

Then there is another personal cost paid every day by Americans who are the customers of the pharmaceutical industry. In 2006, according to Petersen, the average American collected twelve prescriptions; the average senior citizen took home more than thirty. And today nearly 65 percent of the entire American population daily takes at least one prescription medication. "There is a problem, however," Petersen goes on, "... one that the drug companies and doctors prescribing the medicines do not like to talk about. Experts estimate that more than one hundred thousand Americans die each year not from illness but from their prescription drugs. Those deaths, occurring quietly, almost without notice in hospitals, emergency rooms, and homes, make medicines one of the leading causes of death in the United States. . . . Prescription medicines, taken according to doctors' instructions, kill more Americans than either diabetes or Alzheimer's disease." On a daily basis that is two-hundred-seventy people—one every five minutes—killed by prescription drugs.

Could these deaths and serious injuries possibly be one reason the nation's longevity ranking has plummeted?

Hand in hand with these dismal facts of death and destruction wreaked by prescription drugs comes what is really a macabre American success story. All that aggressive marketing works, for which Petersen repeatedly offers



Experts estimate that more than one hundred thousand Americans die each year not from illness but from their prescription drugs.

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proof. “America,” she says, “has become the world’s greatest medicine show.” And the drug merchants have become America’s most powerful industry.

In the section “The Rise of the Medicine Merchants,” Petersen reports on the utter triumph of corporate salesmanship and profit-driven marketing strategies of the largest pharmaceutical companies over science, the practice of medicine, and even the American way of life.

Drug marketers pitch their wares to the public via every means available and in every niche into which they can insinuate themselves, such as state fairs, shopping malls, churches, NASCAR races, on television, billboards, scoreboards, and through nonprofit foundations whose “out-reach” activities are funded by the drug companies.

For example, doctors in Iowa sometimes referred young patients to a nonprofit group called the Magic Foundation, organized by mothers with children with rare growth disorders. As Petersen reports, “Over the years, the foundation had accepted thousands of dollars from the companies selling prescription growth hormone products. In a campaign in the early 1990s, the Magic Foundation, as well as another group, the Human Growth Foundation, had measured the height of children in public schools. The screeners suggested that the shortest children visit their doctors for medical treatment. Most of the schools and the parents did not learn that the two foundations had received most of their funding for the school screenings from Genentech and another hormone manufacturer. . .

“The Magic Foundation. . . continued to recommend hormone injections to short children and their parents and describe the drugs in ways the manufacturers could not do without breaking the law. A story published in the foundation’s glossy magazine that I picked up at a pediatricians’ conference in 2005 was entitled, ‘Me and My Growth Hormone.’ The story began, ‘I was short. My little sister was taller than me. Kids at school picked on me and called me names.’ The tale continued with the child getting growth hormone injections and growing so much his pants got too short. ‘I’m almost grown now,’ the story ended. ‘I’m in the normal range on a growth chart. Growth hormone is like a miracle drug.’”

It might come as a surprise that even though drug advertising is everywhere and directed at everyone from young children to their grandparents, the vast majority of the industry’s marketing dollars is actually reserved for physicians. Cynically viewed as the trusted “gateway” to new customers, physicians are aggressively and lavishly courted by drug company sales reps. According to Petersen, “In 2004 the industry employed an army of 101,000 sales representatives to call on those doctors—two and a half times the size of its sales force in 1995. There is now one drug salesperson for every six physicians, each with an expense account that lets him or

her shower doctors with gifts and cash. Surveys show that virtually every American physician now takes these handouts.” In return, of course, the doctors are expected to provide “scripts” (that is, more customers) and most do.

Since only about ten percent of the sticker price of most brand name prescriptions is needed to cover raw materials and manufacturing costs, the industry is rolling in dough while taxpayers are emptying their pockets. “With their hoards of cash,” writes Petersen, “the companies have readily handed money to patient groups, hospitals, universities, medical schools, physician societies, government agencies, and just about any organization they want on their side. Harvard, for one, has a lecture hall named for Pfizer in a building named for Mallinckrodt, another company.” Industry money influences academia, and what new “blockbuster” drugs will receive money for research. Whether this new drug will help or harm people is not important as long as it will increase profits for company shareholders.

Are there no checks and balances? What about the Food and Drug Administration, or Congress? “The drug companies’ chain of influence is so complete that there are few people left to look objectively at the effects of their products on the nation’s health or at the consequences of their power for society. . . . Washington is the axis of the industry’s power. The pharmaceutical companies spent more on lobbying between 1998 and 2004 than any other industry. By 2004 the companies employed a legion of lobbyists so large that there were more than two for each member of Congress. By using their wealth to buy influence, the drug companies have repeatedly squelched attempts to regulate their prices and promotional practices.”


The pharmaceutical industry has won other laws that allow companies to profit from research and medical discoveries made by taxpayer-funded scientists; to prolong patent protection

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periods by years; and to win lucrative tax credits which have allowed them to pay far lower taxes than other industry groups.

Petersen's disclosure of facts alongside numerous human interest stories are a compelling moral indictment of a corrupt and corrupting "industry." One can even marvel at the lunacy it has created in our medical system: "There is a kind of madness in it. The drug companies pay hundreds of millions of dollars in government fines for promoting their products illegally and hundreds of millions of dollars more to the families of the victims who suffered or died, then raise their prices and promote their products even harder."

Marketing has no place in medicine, Petersen says flat out. She calls for science to become honest again, for physicians to stop taking drug company money, for marketing fraud to be stopped, for patients to arm themselves with knowledge and independent thinking, and for a revolution to start among citizens at the grassroots who will elect officials to defend them and their rights.

She even questions the belief that we need so many pills to be healthy, and wonders whether disease prevention might not be a better route. While all of her recommendations are noble, no one can deny that their realization is a long way off; in the meantime her book serves to educate and sound a moral alarm. Following *Our Daily Meds* with *Fight for Your Health: Exposing the FDA's Betrayal of America* by Byron Richards will complete the picture of corruption in the American medical system as well as bolster those who understand that taking full responsibility for one's health is always the best path. 

Review by Katherine Czapp

THE LIBERATION DIET

By Kevin Brown, CPT, NC & Annette Presley, RD, LD, CPT

This book covers a wide range of topics—calories, lipid hypotheses, water, salt, soy, exercise, milk and other things. Many try to get the facts straight on all these subjects. Few succeed. This one actually succeeds, and succeeds well.

Some important histories are covered, including the history of the lipid hypothesis and the invention of Crisco. One of the most important keys to understanding what is really going on and what is wrong with nutrition today is understanding the history of how we got here.

There is a brief and very instructive section that explains how drugs came to dominate medicine. About one hundred years ago Carnegie and Rockefeller, who had a large vested interest in pharmaceuticals, established the accreditation system for medical schools. Only schools teaching a pharmaceutical approach to medicine received accreditation. Before that there was plenty of competition from natural, homeopathic and nutritional approaches. After that, there was very little competition.

Most Americans put a lot of faith in anyone with a degree and a lot of fancy letters after their name from an accredited school. It's good to know exactly what that really means and how vested interests can appear to be philanthropic while influencing entire cultures and educational systems in ways that are not in our best interests.

Brown and Presley also cover what I call the birth control diet. Reverend Sylvester Graham was a preacher in the 1800s who had a thing against sex. He figured out that a vegetarian, grain-based diet reduced sex drive. He and Dr. John Harvey Kellogg (also against sex) were instrumental in promoting the base of today's government approved food pyramid.

Readers of *The Untold Story of Milk* by Dr. Ron Schmid will recognize a quick recap of the history of milk in the U.S. In the 1930s, salesmen went so far as to show prospective customers samples of partially digested homogenized milk and unhomogenized milk, claiming the homogenized milk was better digested. Of course, to obtain these samples, regurgitation was necessary at some point. This makes me suspect that Americans didn't give up their raw milk due to science, safety or convenience. They were just desperate to put a stop to this sick Ralph and Earl roadshow. I give this one a thumb up.

Review by Tim Boyd

Tim's DVD Reviews

In Defense of Medical Heresy

James Biddle, MD

Asheville Integrative Medicine

In this audio CD, Dr. Biddle discusses the many ironies in the history of medical progress. For instance, during the nineteenth century in Vienna, Austria (among other places) doctors customarily proceeded directly from performing autopsies to delivering children without pausing to wash their hands. Why bother? They were just going to get dirty again anyway. This obviously happened before the germ theory came along. Consequently maternal death rates of puerperal fever (also known as childbed fever) were very high. Dr. Ignaz Semmelweis, as assistant to the professor of the maternity clinic in the Vienna General Hospital in the 1840s, mandated that doctors wash their hands before delivering babies. Contemporary doctors were actually insulted by the new regulation, which was very unpopular, but observed for a time. Mortality rates for childbed fever dropped drastically. One might think this would change standard procedure in the maternity ward but apparently the lesson didn't sink in until sometime in the twentieth century. Meanwhile, Dr. Semmelweis was ultimately dismissed from the hospital, harangued by the medical community for his "extreme" views and forced to leave the city. His continued passionate efforts to change obstetrical procedures resulted in his commitment to an insane asylum where he died only two weeks later, likely a result of severe beating by guards. Something to think about if you want to save the human race.

In more recent times doctors in countries like Canada and Great Britain have formed unions and occasionally go on strike. It has been observed that local death rates fall when they do so. Doctors have to be careful not to strike for

too long or people might figure out that they are better off without all that "health" care.

Dr. Biddle provides many other such stories. The point is that leaving your health up to the leading medical authorities is a very dangerous thing to do. I don't fully agree with every detail in this audio but I'll give it a thumbs up.

Killer at Large

Shinebox Media Productions

"Killer at Large" is a clever name for a video about obesity. First, we get a front-row seat to a liposuction operation performed on a twelve-year-old girl. I found it unnecessarily gross but one of the better points in the DVD was made during the process. After more than one operation trimming all the fat off, the surgeons got her to the point where she looked very slim and pretty. Seven months later we see her again. The weight was back and the operations were ultimately a failure.

There is nothing extremely new about the ensuing list of reasons as to why obesity is a problem in America today. Emotional factors, stress, marketing pressures and modern laziness are all covered. Stress may be a factor but the video makes no mention of the possibility that poor nutrition could be making us more stress-prone. The lamest explanation is the suggestion that we used to be hunter-gatherers so our metabolism is not geared for video games, TV and cubicles, but rather for relentless workouts. I agree that propping oneself up in front of a display screen all day is not a healthy lifestyle, but the other extreme can also be a problem. The fantasy of what a hunter-gatherer life may have looked like is accompanied by an equally simplistic animation that suggests such people exhaustively exercised almost every day—and didn't eat well. The DVD "Fathead" did a much

Doctors have to be careful not to strike for too long or people might figure out that they are better off without all that "health" care.

Tim's DVD Reviews

better job of explaining all of that (and is a much better DVD overall).

For those contemplating liposuction it might be good to watch the first part of the video but even there one won't find much about the associated risks. In summary, thumbs down.

Ripe for Change

Produced by Beyond the Dream LLC

Broadcast on PBS

Local food is promoted heavily in this video. Early on we see a striking image of farmers in what looks like space suits spraying their fields. What's wrong with that picture? The problems with chemicals are explained in some detail. The featured chemical is the herbicide Atrazine, which scrambles sexual characteristics in frogs and fish. Swiss company Syngenta makes the stuff but it has never been legal in Switzerland and is banned all over Europe. The points made in the film are good as far as they go but something is missing.

"Ripe for Change" talks about sustainability. Sustainability is good but except for a shot or two of chickens and a few dogs, I see no animals in this DVD. Where are the beeves? Farmers I have talked to point out that crops take a lot out of the soil and it isn't easy to put the nutrients back. It's impossible with conventional fertilizer. The best fertilizer comes from a cow. Better yet, lots of cows. Even the valid points in this film are not exactly dramatically new revelations for anyone slightly informed on the subject. And no cows. Thumbs down.

How to Save the World **Cloud South Films, Ltd.**


Narrated by Peter Coyote

There are no pyrotechnics or car chase

scenes in this movie. In spite of this lack it still has some redeeming value. Biodynamic farming expert Peter Proctor is on a mission to convert Indian farms to organic or biodynamic farming methods. Many farmers there are receptive, especially after their experience with Monsanto. Financial ruin was not the worst of it. About 150,000 Indian farmers have committed suicide since 1993. This is blamed mainly on crop failure when using, or trying to use Monsanto's genetically engineered seeds. They are ready to try something else now.

This DVD gives you a lot of different views of India. One thing all these views have in common, both in cities and out in the countryside, is bovine presence. Cows are everywhere. What a great country! Contrary to what some would have us believe about harming the environment, they understand that what comes out of the back of the cow (not milk) is critical to restoring damaged and depleted soil.

What struck me most was the interview with a government agriculture officer. He was "happy and astonished as they [farmers] could solve their own problems." They were "working like scientists." Interesting how city slickers all over the world find it surprising that small farmers are actually quite an intelligent bunch. The main difference between India and the U.S. is that as soon as U.S. officials see farmers solving their own problems, they start considering legislation to put an end to it. Gandhi believed in food sovereignty—the right of all people to define their own food and agriculture free of international market forces.

There is a lot of other philosophizing at the end of the film which I will leave to the viewers to decide what they think. One goal is to convert all of India to organic or biodynamic within the next decade. I'm sure Monsanto would be happy to hear that. Thumbs up for this one. 

One goal is to convert all of India to organic or biodynamic within the next decade.

Growing Wise Kids

CELEBRATE SUMMER WITH A POP!

By Jen Allbritton, CN

Nothing captures the true essence of summer better than sitting on the front porch with a homemade, nutrient-packed popsicle in hand. It is best experienced while leisurely soaking in the warm rays of the sun with toes wiggling in the grass, messy faces, and not a care in the world.

After a morning of hard play in the sandbox or a treasure hunt for rocks and sticks, my preschooler adores sitting down for a soothing, cooling popsicle as a snack or after-lunch treat. Even on some of those more care-free days, I serve a few of the below recipes as a full meal, they are so nourishing!

FIRST THINGS FIRST: THE MOLD

For years I settled for plastic popsicle molds (which are readily available on the internet and local cookware establishments). I'd rather avoid plastic, but I didn't want to go without these delightful summer treats. There is the paper cup option, but I was worried about spillage in my already over-full freezer. So one day a friend asked for help finding an alternative popsicle mold, since she shares my aversion to plastic. (See *Why Pass on Plastic* side bar on page 80.)

After some searching and pondering, the answer finally came: glass jelly jars—4-ounce or 8-ounce sizes work beautifully!

For simplicity's sake, you could just use the glass portion for the popsicle, slip in a stick and cover the top with a piece of aluminum

foil. (Note: it is helpful to first let the mixture freeze a little before adding the stick so it stays upright.) However, I took the idea a step further. My husband is handy with tools, so I asked him to cut a slit slightly thicker than a popsicle stick in the jelly jar lids. Then I filed down the rough edges with sand paper until smooth. The screw top portion of the lid is still able to twist shut, minimizing the popsicle's exposure to air. While glass is certainly the best option for reducing your exposure to possible contaminants, it is, of course, breakable. So be sure to gradually cool the glass with warm water to loosen the pop inside since using hot water might cause the glass to crack. See a picture of our creation below. If you are not handy in the workshop, enlist some friends. Try trading their handiwork for a yummy batch of any of these delicious creations and they will be more than compensated!

Don't want to use glass? For some families, glass is not the best choice for one reason or another. There are a few molds on the market made of silicon, which is a safer material than plastic. Krystina Castella, in her inspiring book titled *POPS!*, uses all kinds of unique molds and even gives directions on how to make your own silicon



Homespun popsicle molds—plastic free!

versions.¹

Regardless of the mold, ingredients will expand while freezing (especially ingredients with more air content, such as a smoothie or a carbonated beverage), so leave at least 1/4 inch at the top. It is best to leave your pops frozen in

Fresh fruit is one of the best ways to celebrate summer. Berries pack an especially powerful nutritional punch compared to other fruits with their lower sugar content and higher skin-to-pulp ratio.

their molds to prevent freezer burn, which will also keep them fresh for up to two weeks.

Popsicles have unlimited ingredient possibilities—put on your kitchen-cap and get inspired!

FROZEN FATS

Diets based on traditional food practices are teeming with natural fats; thus, our pops should follow suit. Below is a selection of fats for popsicle-making. Try to include one or more of these in every pop.

- Any full fat dairy product (cow or goat), especially fermented varieties for their probiotic-benefits: kefir, buttermilk, yogurt, or cream fraîche
- Kefir or yogurt cheese (leftover from making whey; see my Spring, 2009 article titled “Enjoying Little Miss Muffet’s Curds and Whey” for more on this subject)
- Ice cream (made from dairy or coconut milk)
- Coconut oil
- Coconut milk or coconut cream
- Almond milk or other nut milks
- Avocados (a surprising ingredient for added creaminess)
- Nut butters
- Raw egg yolks

FABULOUS FRUIT

Fresh fruit is one of the best ways to celebrate summer. Berries pack an especially powerful nutritional punch compared to other fruits with their lower sugar content and higher skin-to-pulp ratio. Most of the health-promoting pigments reside in the skin, which is obvious from their brilliant colors—the pinkish-red of a raspberry, the deep violet of a blueberry and the fiery glow of a cherry. Fruit can be blended into a mixture or cut into small pieces and tossed

into the bottom of the mold, which gives an alluring look to your end product.

While fresh whole fruit has a gigantic nutritional leg up on juice, I believe summer pops to be an acceptable place to “let loose” if you will. Still, stick with the more concentrated, nutrient-dense extracts, such as goji, dark cherry, black currant, elderberry, blueberry or pomegranate. Homemade lemonade or limeade also makes a tasty pop.

HERBAL INFUSIONS, TEAS AND JUICES

A strongly brewed herb or tea can make a flavorful and colorful base for a popsicle (see the recipe Gelasicles, page 81), many even offer therapeutic properties. (See side bar Sicles for the Sickie, page 81.) For instance, try rooibos (aka Red Bush tea) for its high antioxidant content, or the India-originating herb holy basil (Tulsi tea) for its adaptogenic properties. Both of these make excellent bases for popsicles. You could even make carrot juice pops; maybe add some other fruity flavors for variation.

For the more mature palates in the family, try freezing a favorite herbal coffee-alternative concoction or chai you make up during the winter with almond milk or cream (freezing tends to dull the taste, so be sure to brew your concoctions extra strong). For these more liquid-based pops, gelatin provides a bit of body. The protein matrix of the gelatin traps water and gels when cooled, ultimately making a softer popsicle that melts more slowly. Added sugar helps prevent the pop from freezing into a solid block of ice by lowering the freezing point. Dissolving the sugar into the base ingredient makes for an even better distribution of flavors throughout and a smoother texture.²

FUN EXTRAS

Add some pep to your popsicles with one or more of these decadent additions, mix-ins or toppings:

- Crispy nuts: almonds, cashews, hazelnuts, pecans, etc.
- Seeds: chia, poppy, sesame, etc.
- Coconut: flaked or shredded
- Dehydrated beet powder for a fantastic red color
- Chopped dried fruit
- Homemade cookie crumbles
- Jams or fruit spreads, homemade, preferably
- Spirulina (makes a fun green color or can be hidden behind the blue of blueberries or brown of carob)
- Spices (cinnamon, nutmeg, mint, pumpkin pie mix, ginger or even chili for those who want a little extra bite to their pop)
- Zests: lemon, orange, or lime

HISTORY OF THE EPSICLE. . . I MEAN, POPSICLE:

Although food historians suspect that the Italians came up with the concept of a frozen fruit treat somewhere during the late 19th century, the story of American Frank Epperson is much more interesting, if not more documented. In 1905, eleven-year-old Frank accidentally left a stirring stick in a glass of lemonade on the back porch on an unusually frigid night in San Francisco. After realizing his genius discovery, Epperson appropriately named it “Ep-sicle,” but years later changed the name to popsicle after hearing his children scream for “Pop’s sicles.” He applied for a patent, but it wasn’t granted until 1924. He ended up selling his invention, and today the rights to his patent are owned by Good Humor.

- Edible flowers or herb leaves: add one or two vibrant orange or yellow nasturtiums in a base of a fruity herbal tea sweetened with honey or a few lavender blossoms in a lemonade pop. Try all types of edible flowers, such as lemon verbena, lemon balm, mint or lilacs.
- Carob chips: see the homemade recipe in *Nourishing Traditions*
- Powdered or liquid superfoods: bee pollen, colostrum or high-vitamin C berry powders (e.g. acerola or camu camu)

SWEETENERS

With fruit-filled pops, additional sweetness is often unnecessary, unlike cream-based varieties, which often need a little boost. The more obvious choices are raw honey (local if possible), maple syrup and brown rice syrup. Another fun option is dates (usually soaked for up to a few hours to rehydrate, to help them smooth out a bit), which also help add a creamy texture. Stevia whole leaf powder works well in these types of recipes (note: it will leave a green color).

ICY, CREAMY, DREAMY RECIPES

Use these recipes to jump-start your own creations. Keep experimenting, and remember, make notes as you go along. There is nothing worse than stumbling onto something your family is crazy about, only to find that you can't remember the exact proportions—believe me, I speak from experience!

RAZZLE RASPBERRY CREAMSICLE

1 cup frozen or fresh raspberries
1 cup yogurt, kefir, kefir cheese or raw cream
1 tablespoon (or to taste) raw honey

1 teaspoon vitamin C-rich berry powder of choice, optional
1/2 teaspoon vanilla or almond extract, optional

Blend, or just stir if you like your pops with a bit more bulk, pour into popsicle molds and freeze. Variations: substitute blackberries, ripe bananas or peaches (peaches go well with almond extract). Also try substituting the fruit with diluted fruit juice concentrate, like goji, dark cherry, black currant, elderberry, blueberry or pomegranate.

TROPICAL COCONUT POP

1 13.5-ounce can coconut milk (or coconut cream equivalent)
1-2 bananas, depending on size
32 ounces frozen mango or pineapple, or a blend
1-2 tablespoons coconut oil
1-2 raw egg yolks
dash of vanilla
1 tablespoon maple syrup, or to taste
flaked coconut (optional)

Blend, pour into popsicle molds and freeze.

WHY PASS ON PLASTICS?

Plastics have a shady history. Plastics were once hailed as a miracle material, but the contaminants they contain are now recognized as carcinogens. Don't get me wrong, medicine and other fields of study have benefited from plastic, but the health of humans, animals (especially aquatic) and the planet are suffering the consequences. Luckily, we have a large margin of control over just how much our own family comes in contact with plastic, which is more prevalent than one might think. Water bottles, baby bottles, toddler sippies and food storage containers may be obvious, but a less known fact is that plastic also lines most aluminum cans (some more health-minded companies are using other materials) and is found in dentistry composites and sealants. Bisphenol A (BPA), a chemical in plastic, has even been found in infant formula! While BPA has received some negative press lately, it isn't the only offending chemical in plastic. Phthalates and flame retardants (PBDEs) also deserve attention for their disastrous effects on humans and laboratory animals. Newer research confirms many of the old findings on these chemicals—endocrine disruption (in adults and babies), thyroid disruption, and increase risk of cardiovascular disease, diabetes and liver enzyme abnormalities.³ And recently, the Yale School of Medicine found that BPA "causes the loss of connections of brain cells," which increases the risk for memory problems and even depression.⁴

The bottom line is, when at all possible, avoid using plastics, especially where foods or beverages are concerned and even more so when there is heat (such as in a hot car or microwave) applied or the plastic has been reused. Opt for glass at home for beverages and waxed paper or canvas tie-string bags for sandwiches and foods. Away from home, I prefer stainless steel containers to plastic, bear in mind there are some concerns as to the safety of stainless steel due to the possibility of toxic levels of nickel leaching into the liquid, particularly when in contact with fermented or other acidic foods and beverages (see *Wise Traditions*, "Cookware Dilemma" Fall 2008 p.11). If you choose to use stainless steel, stick with the least reactive fluids, such as non-fluoridated or chlorinated water or milk. If you choose to use plastic, try to find BPA-free and/or phthalates-free plastic, such as baby bottles or toddler sippy cups and water bottles. Lastly, choose the "safer" plastics that use polyethylene (#1, #2, #4 and #5).

GELASICLES

Just about any mix of fruit will turn out tasty with this recipe!

2 tablespoons gelatin

1 cup strong brewed tea (try strawberry leaves, peppermint, hibiscus or another fruity flavor) or a fruit juice extract (blueberry, dark cherry, pomegranate)

1 cup coconut milk

4 tablespoons Rapadura (or other whole food sweetener)

3 cups of fruit (berries, bananas, apricots, plums, etc.)

Heat tea, gelatin and sugar in a saucepan over low heat until the gelatin dissolves (approximately 5 minutes). Purée the fruit with the gelatin mixture. Pour into popsicle molds and freeze.

PUDDING POP

6 ounces coconut cream or kefir cheese

1 cup coconut milk or raw cream

2 or more tablespoons almond butter

6 large dates, pitted and soaked

2 tablespoons cocoa or carob powder

1 teaspoon vanilla extract

pinch sea salt


Blend, pour into molds and freeze.

THE “ACCIDENTAL” POP

Have you ever attempted to make a pudding, mousse, smoothie or custard that just didn’t make it? Don’t toss it out—freeze it; there is a good chance it might do well as a popsicle!

And speaking of accidents, if you are using popsicle molds without the drip tray, try the coffee filter trick. To help keep fingers clean, slip a coffee filter over the stick of the popsicle. The filter can double as a face wipe.

THE QUEEN OF POPS

Did you know pop making is an art form? It is if you have the imagination and pop-passion of Krystina Castella, author of *Pops! Icy Treats for Everyone*. She takes pop-making to a whole new level. Not only is *POPS!* a feast for the eyes in and of itself, the recipes in her book will get your creative pop-wheels turning. She features the most basic, easy-to-make recipes, all the way to gourmet dinner party delights. If you get the chance, at least check this one out from the library for inspiration. 

Jen Allbritton is a certified nutritionist and author. She lives with her family in Colorado and spends lots of time in her kitchen cooking up WAPF-friendly creations. Contact her if you’d like to learn more about subjects related to diet and children: jen@nourishingconnections.org.

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SICLES FOR THE SICKIE

Sweet, desserty popsicles are the norm; however popsicles made from medicinal herbs offer up a unique means of hydrating an unwilling sickie while cooling throat and mouth discomfort. Good herbs to try include cleavers, elder flowers, spearmint, licorice, lemon balm, wintergreen and ginger.⁵ And don’t forget to add raw honey when there is a cough involved; it has been proven to be an excellent remedy.⁶ Herbal tinctures with a glycerine base may also be a useful addition. Check out this throat soother tea below. These herbal pops may be best made in smaller quantities, such as an ice cube tray, to avoid waste.

THROAT SOOTHER POPSICLE

5 inches fresh ginger, roughly chopped

zest of one lemon

1/4 cup chopped fresh mint leaves (or 4 teaspoons dried peppermint)

3 tablespoons fresh lemon juice

2 tablespoons raw honey (preferably local), to taste

Combine ginger, zest, mint and 6 cups water in a saucepan and bring to a boil (covered). Reduce to a simmer (uncovered) until the mixture has reduced to 5 cups (approximately 30 minutes). Strain and return liquid to the saucepan. Add the lemon juice and honey to taste. Pour into molds and freeze.

Soy Alert!

CRUEL AND UNUSUAL PUNISHMENT: UPDATE ON THE ILLINOIS SOY PRISON CASE

By Sally Fallon Morell



When Rod Blagojevich was elected governor of Illinois in 2002, he immediately made a change in the prison diets. Beginning in January 2003, inmates began receiving a diet largely based on processed soy protein, with very little meat. In most meals, small amounts of meat or meat by-products are mixed with 60-70 percent soy protein; fake soy cheese has replaced real cheese; and soy flour or soy protein is now added to most of the baked goods.

The governor's justification for replacing nutritious meat and cheese with toxic soy protein was financial—to lower the enormous costs of running the Illinois Department of Corrections. However, the likely reason is payback for campaign contributions from Archer Daniel Midlands, the main supplier of soy products to the Illinois prisons.

SUFFERING OF INMATES

Early in 2007, the Weston A. Price Foundation began hearing from inmates who were suffering from a myriad of serious health problems due to the large amounts of soy in the diet. These prisoners had found us through the Soy Alert! section of our website. Complaints include chronic and painful constipation alternating with debilitating diarrhea, vomiting after eating, sharp pains in the digestive tract, especially after consuming soy, passing out, heart palpitations, rashes, acne, panic attacks, insomnia, depression and symptoms of hypothyroidism, such as low body temperature (feeling cold all the time), brain fog, fatigue, weight gain, frequent infections and enlarged thyroid gland. Since soy contains anti-fertility compounds, many young prisoners may be unable to father children after their release.

The suffering of these men is intense and medical care is palliative at best. Many have had sections of their digestive tract removed, but all

requests for a soy-free diet are denied. The men are told, "If you don't like the food, don't eat it." That means that unless they can afford to purchase commissary food, they must eat the soy food or starve. To date we have heard from over one hundred inmates describing their symptoms and begging for an end to the soy-based diet.

In October, 2008, we sent an "Open Letter to President-Elect Barack Obama" as a press release (see <http://www.westonaprice.org/soy/obama-letter.pdf>). This letter was widely circulated on the internet and sent to every elected official in the state of Illinois, with a follow-up phone call. The result: silence. No response, and no articles in major media.

LAWSUIT

With elected officials turning their backs on the plight of prisoners, our only recourse is the courts. The Weston A. Price Foundation has hired an attorney to represent several inmates incarcerated in the Illinois Department of Corrections system. The Foundation's attorney has entered his appearance on behalf of three inmates, has had contacts with several other inmates, has served several subpoenas upon the wardens of several facilities for documents and other information, and has informed the Court that additional inmates will soon be named in an amended complaint.

The lead case is captioned Harris et al. v. Brown, et al., Case No. 3:07-cv-03225, and is currently pending before the Honorable Harold Baker in the United States District Court for the Central District of Illinois. The suit seeks an injunction putting a halt to the use of a soy-laden diet in the prison system.

HOW YOU CAN HELP

Donations to the Weston A. Price Foundation

The suffering of these men is intense and medical care is palliative at best.

(Soy Alert! Campaign) can help with the high cost of legal representation.

Letters to the press, Illinois elected officials (including the governor and attorney general of Illinois) and even U.S. Congressional representatives can alert others to this serious situation—which threatens not only the health of inmates but the future of fiscal solvency in the state of Illinois —because personal injury lawsuits are bound to follow.

Write to the U.S. Department of Justice and request that they initiate an investigation and enforcement action under the Prison Litigation Reform Act, 42 United States Code Section 1997a, also known as the Civil Rights of Institu-

tionalized Persons Act (CRIPA). A sample letter is given below.

FOR RELATIVES OF INMATES

The soy diet, especially when consumed in large amounts for a lengthy period of time, will destroy the health of your loved one in prison. The most important way you can help is to send your incarcerated relative money to purchase commissary food.

Write or visit your elected officials about this situation. This contact can be especially effective from those who know on a first-hand basis the suffering the soy diet has caused.

Write to the U. S. Department of Justice and

SAMPLE LETTER SENT BY A CONCERNED CITIZEN

[Date]

Honorable Eric Holder, Attorney General
U.S. Department of Justice
950 Pennsylvania Avenue
Washington, DC 20530

Copy to:
Patrick J. Fitzgerald, Special Council
U.S. Department of Justice, Northern District of Illinois
Federal Building, 219 South Dearborn Street, 5th Floor
Chicago, Illinois 60604

Dear Sirs:

I am writing to request that you initiate an investigation and enforcement action under the Prison Litigation Reform Act, 42 United States Code Section 1997a, also known as the Civil Rights of Institutionalized Persons Act (CRIPA).

I am concerned about the practice of feeding a soy-based diet to inmates in the Illinois prisons, which was initiated in January of 2003. According to information posted in the FDA's Poisonous Plant Database and from research published in medical journals over the past sixty years, soy has the potential to cause serious health problems, especially if consumed in large amounts. This diet may make it impossible for those incarcerated in Illinois to engage in necessary activities to earn their living after their release and may even cause them to have medical problems that will be very costly to the state of Illinois.

According to law, prisoners are entitled to "nutritionally adequate food" (Ramos v Lamm, 639.2d 559, 1980). According to Illinois law, "Infliction of unnecessary suffering on prisoner by failure to treat his medical needs is inconsistent with contemporary standards of decency and violates the Eighth Amendment" (Key Note 7. Criminal Law 1213).

The justification for the switch from beef to soy is to save money, but according to one court case, "A lack of financing is not a defense to a failure to satisfy minimum constitutional standards in prisons" (Duran v. Anaya, 642, Supp. 510 (DNM 1986), page 525, paragraph 6).

I urge you to look into this situation and take action to reinstate a nutritious diet for the inmates in Illinois prisons, before the soy diet irreparably destroys their health.

Sincerely yours,

[Name]
[Address]
[City, State, Zip]

request that they initiate an investigation and enforcement action under the Prison Litigation Reform Act, 42 United States Code Section 1997a, also known as the Civil Rights of Institutionalized Persons Act (CRIPA). A sample letter is given below.

FOR INMATES

Follow procedure and submit grievance reports, delineating your health problems and requesting a soy-free diet. Be sure to keep copies of all grievance reports and medical records.

Write to Judge Harold Baker describing your health problems on the prison soy diet and requesting to be included in Harris et al. v. Brown, et al., Case No. 3:07-cv-03225 or any subsequent cases on this issue. Keep your letter respectful and concise. His address:

Honorable Harold Baker
United States District Court Judge
for the Central District of Illinois
338 U.S. Courthouse
201 South Vine Street
Urbana, IL 61802

Use your commissary money wisely to purchase healthy foods. Good choices include sardines, tuna and salmon, cheese, summer sausage, Spam (for vitamin D and healthy fats), pork cracklings and plain rice. Avoid sweets, chips, sodas, etc. as these make you more vulnerable to the harmful effects of soy.

For further information, visit Soy Alert! at westonaprice.org. 

SAMPLE LETTER SENT BY A RELATIVE OF AN INMATE

[Date]

Honorable Eric Holder, Attorney General
U.S. Department of Justice
950 Pennsylvania Avenue
Washington, DC 20530

Copy to:
Patrick J. Fitzgerald, Special Council
U.S. Department of Justice, Northern District of Illinois
Federal Building, 219 South Dearborn Street, 5th Floor
Chicago, Illinois 60604

Dear Sirs:

I am writing to request that you initiate an investigation and enforcement action under the Prison Litigation Reform Act, 42 United States Code Section 1997a, also known as the Civil Rights of Institutionalized Persons Act (CRIPA).

I have a relative, [first name, last name, identification number], who is presently incarcerated in [name of facility]. He has been incarcerated there since [date of incarceration]. He has become ill with the following symptoms since the Illinois Department of Corrections began feeding a soy-based diet in January 2003: [List symptoms].

He has not been able to get appropriate medical care from the prison staff and I am concerned about the long-term effects of this soy diet on his health. According to information posted in the FDA's Poisonous Plant Database and from research published in medical journals over the past sixty years, soy has the potential to cause serious health problems, especially if consumed in large amounts. This diet may make it impossible for [name of inmate] to engage in necessary activities to earn his living after his release and may even cause him to have medical problems that will be very costly to the state of Illinois.

According to law, prisoners are entitled to "nutritionally adequate food" (Ramos v Lamm, 639.2d 559, 1980). According to Illinois law, "Infliction of unnecessary suffering on prisoner by failure to treat his medical needs is inconsistent with contemporary standards of decency and violates the Eighth Amendment" (Key Note 7. Criminal Law 1213).

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I urge you to look into this situation and take action to reinstate a nutritious diet for the inmates in Illinois prisons, before the soy diet irreparably destroys their health.

Sincerely yours,

[Name]
[Address]
[City, State, Zip]

SOY UPDATE: TRUMPED UP SUCCESS, TRUMPED UP BENEFITS

By Kaayla T. Daniel, PhD

“Soyfood sales top \$4 billion.”

That’s the news trumpeted by the soy industry in its latest market report “Soyfoods: The U.S. Market 2009.” Sales topped \$4 billion in 2008 because “increasingly, knowledgeable consumers voted with their feet even as the financial crisis has set in.” (Interesting phrase there. Sounds to me like a prescription for “foot-in-mouth” disease.)

Seems that the image-conscious soy industry would have us believe that increased sales are due to “consumer awareness of health benefits.” That claim is debatable, however. Whether the new customers are knowledgeable, health conscious and willing to pay extra is subject to doubt given the fact that the same report indicates that most of the increased sales came heavily from soy’s “expanded presence in multiple distribution channels.” Specifically, that expansion has been into Wal-Mart, club stores and food service operations, places where soy sales grew in 2008 by 3 per cent as opposed to 1.8 percent in supermarkets and natural food stores. Food service operations are places where cost cutting and assembly line food production methods rule, as in school and hospital cafeterias, restaurant and hotel chains, the military. . . and prisons.

Although \$4 billion represents a lot of soy sold and presumably eaten, the figure is a far cry from the \$8 billion per year projected back in 2004. At that time, the industry had high hopes that the FDA would approve a soy-prevents-cancer health claim that would scare cancer-fearing American consumers into gobbling down twice the amount of soy. Instead the Solae Company (a joint venture of DuPont and Bunge) quietly withdrew its petition in 2005 in the face of massive evidence, presented by the Weston A. Price Foundation, that soy can cause, contribute to and accelerate the growth of cancer, particularly breast cancer. Although Solae promised to revise its petition and resubmit, that hasn’t happened and isn’t likely to anytime soon or ever.

Instead, the soy industry is dancing as fast as it can just to keep the 1999 soy-prevents-heart disease health claim in place. Even the mainstream American Heart Association is after the FDA to revoke it. Judging from this latest market report, the industry plan is keep the bad news under cover and repeat the mantra “health benefits” literally *ad nauseum*, until it is seared into mass consciousness. As the report states, “Health remains a main driver with soy products slipping into the mainstream . . .”

Meanwhile, we have a major confession from the National Institutes of Health. The agency actually admits it’s been supporting research on soy and health for many years but is clueless about if and when soy prevents or cures much of anything. Or has even been proven safe! After commissioning a thorough review of the literature (<http://www.ahrq.gov/clinic/tp/soytp.htm>), NIH found a “large but weak literature with equivocal findings” and “some troubling data about soy products used in research, which included confounding produced by unanticipated levels of phytoestrogens in animal feed” (Heindel et al. Environmental Health Perspectives 2008;116(3);389-393). In other words, to ascertain the benefits of soy, scientists compared its effects in animals to animals fed a control diet full of soy, a great way to hide the negative effects caused by soy feeding.

To help sort things out, the NIH plans a workshop for nutritionists, scientists, MDs, epidemiologists, biochemists and clinical trialists from academia, industry and government. Their job will be to figure out how to guide “the next generation of soy protein and isoflavone human research.” A key task is to identify methodological issues relative to exposures and interventions that may confound study results and interpretation and to find ways to deal effectively with these issues in the design, completion, reporting and interpretation of studies. NIH also hopes this group will address issues related to exposure to soy and other phytoestrogens, factors influencing variability of response and negative consequences of exposure. Sounds to us like a belated admission that soy might have a “dark side.”

MOO-VING SOY

Burcon NutraScience has just patented a soy protein isolate that should “be of great interest to food and beverage manufacturers currently dealing with high dairy protein prices.” Known as “Clarisoy,” it is described as having “exceptional flavor characteristics” and no odor. How these food products will be “healthy” is a mystery given the fact that Clarisoy is touted for its complete solubility and transparency in acidic solutions, tolerance of even the very acid pH of 2.5. and stability at high temperatures needed for “hot fill applications.” The announcement followed Burcon’s recent boast that it was the first to achieve GRAS (Generally Recognized As Safe) status for use of its canola protein isolates Puratein® and Supertein™ in food in the U.S. With all these new “commercializable products,” Burcon hopes its GRAS-feeding will result in a whole herd of healthy cash cows (<http://www.newswire.ca/en/releases/archive/May2009/26/c7915.html>).

NAIS Update

NATIONAL ANIMAL IDENTIFICATION SYSTEM: COMING TO A BOIL

By Judith McGeary, Esq.

The National Animal Identification System (NAIS) started back in the 1980s with the informal plans of industrial agriculture groups and technology companies. For newcomers to this issue, NAIS is a plan to require anyone who owns even one livestock or poultry animal—even just a single chicken or a pet horse—to register their property, tag each animal (in most cases with electronic identification, such as microchips or RFID tags) and report their movements to the government within twenty-four hours. Most people started to become aware of this issue back in 2005, when the USDA released its formal plan to implement NAIS.

In the four years since then, the grassroots has mounted a growing opposition to the program. Five states—Arizona, Kentucky, Missouri, Nebraska, and Utah—have passed state laws barring mandatory implementation, while more than a dozen other bills have been introduced in other states and gained significant support. Yet it seems that, as the grassroots opposition has grown, so has the push to implement this intrusive and expensive program. Both sides have turned up the heat, and the issue may come to a head soon.

FARM-TO-CONSUMER LEGAL DEFENSE FUND'S LAWSUIT TO STOP NAIS

The Farm-to-Consumer Legal Defense Fund is challenging NAIS in the federal district court of DC. The Michigan Department of Agriculture (MDA) has implemented the first two stages of NAIS—property registration and animal identification—for all cattle and farmers across the State under the guise of its bovine tuberculosis disease control program. MDA's implementation of the first two steps of NAIS was required, in part, in exchange for a grant of money from the USDA. The Fund's suit asks the court to issue an

injunction to stop the implementation of NAIS at both the state and federal levels by any state or federal agency. If successful, the suit would halt the program nationwide.

The lawsuit is still in the early stages, but the Fund has won a couple of initial skirmishes. In January, in response to the agencies' motion to dismiss the case, the Fund sought to file an amended complaint to add another plaintiff, a Fund member from Pennsylvania, and to expand on the allegations in its original complaint. The agencies opposed the filing, but the Court granted the Fund leave to file the amended complaint. Shortly afterwards, the Fund objected to the incomplete and skewed record filed by the USDA, which did not truly reflect the agencies' actions on NAIS. The Fund filed a motion to supplement the record which was opposed by the agencies. The Court partly ruled in the Fund's favor, granting the Fund's request to add more than a hundred additional government documents into the formal record, while denying its request to include non-governmental documents which the Fund contends are relevant.

Neither of these rulings has addressed the merits of the case. The USDA and MDA have filed new motions to dismiss the amended complaint and both sides have filed extensive briefs. In essence, both agencies argue that Michigan is not really implementing NAIS and that, since NAIS is "voluntary," the government does not have to go through any of the regular procedures, such as analyzing the impacts on small businesses or the environment. The Fund contends that, in practical terms, both MDA and USDA have made NAIS mandatory for thousands of people already. It is not clear when the Court will make a decision on these motions, so stay tuned.

Judith McGeary is an attorney and small farmer in Austin, Texas, and the Executive Director of the Farm and Ranch Freedom Alliance. She has a B.S. in Biology from Stanford University and a J.D. from the University of Texas at Austin. She and her husband run a small grass-based farm with sheep, cattle, horses, and heritage breed poultry. For more information about NAIS and what you can do to stop it, go to www.farmandranch-freedom.org or call 1-512-243-9404.

CONGRESSIONAL HEARING

The NAIS is heating up in Congress as well. After years of allowing the USDA to implement NAIS with federal funding, but no Congressional oversight, the House Subcommittee on Livestock, Dairy and Poultry has held two hearings about NAIS this spring. The first hearing featured a line-up of Big Ag groups speaking in favor of a mandatory program, sometimes using the latest euphemism, namely “an effective program.” But R-CALF USA, an independent cattlemen’s group, gave strong testimony about why NAIS is *not* needed and some of the harms it would cause.

The second hearing, done in cooperation with the Homeland Security’s Subcommittee on Emerging Threats, Cybersecurity, and Science and Technology, featured an even more biased set of panelists uniformly testifying in favor of a mandatory NAIS. A few Congressmen raised concerns about the program that were not well-addressed by the panelists.

COST-BENEFIT ANALYSIS

At the first hearing, several Congressmen asked about the cost-benefit analysis of NAIS that USDA had commissioned almost two years ago. Just before the second hearing, USDA finally released the study. The study acknowledges that the costs for small farms with cattle would, on average, be almost three times higher per animal than for large operations. And the cost-benefit analysis grossly underestimates the true costs for small farms because of the numerous gaps, false assumptions and misleading tactics used in the study. I’ll touch briefly on a few of the most egregious flaws.

First, the study manipulates the categorizations to disguise the costs to small farmers, homesteaders and other individuals with a few animals. For example, in estimating the costs for beef cattle, the study uses six categories based on the number of cattle on the farm, and estimates the costs for producers in each category.¹ The first category includes operations that have anywhere from 1 to 49 head of cattle and encompasses 585,050 operations or 77 percent of the total number of operations. There is no valid statistical reason to create a single category with that many operations while dividing the remaining

23 percent of operations among six different categories. Moreover, this approach is not consistent with the USDA Census, which separately counts operations with 1-9 head, operations with 10-19 head and operations with 20-49 head. In other words, the research team had the data available to estimate costs for smaller categories and simply chose not to. The study uses similarly skewed categories for pigs and sheep. Given the USDA’s own finding that costs increase as herd size decreases,² the study’s choice of categories obscures the real costs to small operations.

Second, the study incorrectly discounts costs for technological infrastructure. The study acknowledges that NAIS will require extensive technological infrastructure by individuals, including computers, software and internet access. The study also acknowledges that many small farms do not own computers or have internet access.³ Yet the study then assumes that the hundreds of thousands of people who will be forced to buy additional technology would have “other uses” for those computers, software and internet access, and therefore only counts 50 percent of those costs! While many farms and individuals may have use for such technology, that is obviously not true for everyone, and the entire computerization costs should be allocated to NAIS.

Third, the study makes assumptions about the use of group identification for sheep and poultry that contradict the USDA’s own documents. The study states that poultry operations “would utilize exclusively lot identification systems”⁴ and assumed that lambs moving direct to slaughter would be identified by group or lots.⁵ But this assumption does not reflect the government’s plans. Hundreds of thousands of poultry and sheep owners would not be able to use group identification for their animals.⁶

The USDA documents state that group or lot identification is available where groups of animals are managed together from birth to death and not commingled with other animals. In practice, this only occurs in the vertically integrated confinement operations, not on small farms. Many pastured poultry and grass-fed lamb farms would not qualify for group identification, yet USDA did not even try to quantify the costs to these farms or to the many people raising a few

The cost-benefit analysis grossly underestimates the true costs for small farms because of the numerous gaps, false assumptions and misleading tactics used in the study.

In essence,
individual
rural
Americans'
version of
Main Street
will be taxed
for the benefit
of Big Ag's
version of
Wall Street.

poultry or lambs for their own food or as pets.

Fourth, the study makes unsupported assumptions about many of the costs that will be imposed. For example, the study recognizes that the cost of RFID readers will not be economical for small producers, so it advances the premise that a new business will spring up to do custom reading.⁷ It then assumes that there will be custom tag reader businesses within twenty-five miles of each small farm, even though ranches in the West and Southwest may encompass more than twenty-five miles of territory each. It also assumes that the cost of RFID reading will be comparable to the cost of brand inspections, even though brand inspections do not require expensive equipment, unlike RFID tagging and reading. Based on those fundamentally flawed assumptions, the study claims that someone with five head of cattle would pay only \$9.35 (\$1.87 per head) to have someone drive out to their farm and electronically read the tags.

Another flaw of the study, which has been a recurring issue in many debates about NAIS, is the massive underestimation of the number of "premises" affected by NAIS, and as a result, the underestimate of the total costs of the program. All of the cost estimates are based on data from the USDA Census. Yet the USDA Census, by definition, covers only those operations that have \$1,000 or more of agricultural product for sale in the census year. Not only do many people fail to respond to the Census, but hundreds of thousands of hobby animal owners, homestead-

ers and micro-farmers are not covered. Yet these people would be covered by NAIS. The USDA's own premises registration statistics reveal the severe undercounting of affected people. While the Census lists only 3,555 "premises" in Massachusetts, the USDA has registered 8,066 premises in that state—227 percent of the estimate!⁸ And since the cost-benefit analysis relies on the Census estimates, the estimates of the total costs of NAIS—to both individuals and the government—are fundamentally flawed.

This was a cost-benefit analysis, so what about the benefit portion? The main benefits discussed by the study are related to the export market. Indeed, in identifying the "three key points" from the study, USDA lists the value to the export market and the global marketplace as the key benefits.⁹ Not only are the alleged benefits based on speculation rather than fact, this approach is entirely improper. The majority of the costs of NAIS will be borne by individual animal owners ranging from pet owners to large ranchers. But the export market benefits will accrue almost entirely to a handful of large companies who participate in the export market. In essence, individual rural Americans' version of Main Street will be taxed for the benefit of Big Ag's version of Wall Street.

In summary, the USDA cost-benefit analysis is rife with improper statistical manipulations, unsupported and illogical assumptions, and a cavalier disregard for the people who will actually bear the costs.

TAKE ACTION!

USDA is accepting written comments through the end of June (and possibly longer). You can use our sample comments: <http://farmandranchfreedom.org/content/Sample-comments>. Be sure to personalize them to have the greatest impact!

Submit comments ONLINE: <http://www.regulations.gov/fdmspublic/component/main?main=DocketDetail&d=APHIS-2009-0027>. The Federal Register site can be confusing and difficult. Here's what to do:

- 1) Click on the yellow balloon under the "add comments" column.
- 2) Fill out the required fields and type in your comments. If your comments are more than a paragraph or so, we recommend that you first write them in a word document and then copy & paste them into the comments field.
- 3) Click on "next step."
- 4) At the end of the process, you should receive a confirmation number.

or MAIL to: Attn NAIS, Surveillance and Identification Programs
National Center for Animal Health Programs, VS, APHIS,
4700 River Road Unit 200, Riverdale, MD 20737


USDA LISTENING SESSIONS

It's an important time for people to speak out about the costs of NAIS, as well as the myriad other problems with the program. In April, Secretary Vilsack held a roundtable in DC and invited several of the groups opposing NAIS to participate, including the Farm and Ranch Freedom Alliance. The DC roundtable kicked off a series of thirteen listening sessions around the country scheduled for May and June.

At the time this article goes to print, USDA has held five of the listening sessions. The participants at all the meetings have been overwhelmingly anti-NAIS. The Farm and Ranch Freedom Alliance, the Weston A. Price Foundation, and the Farm-to-Consumer Legal Defense Fund have worked with many other organizations nationwide to help publicize the meetings and encourage people to attend. The individuals opposing NAIS at each meeting included not only farmers and ranchers but also auction barn owners, technology experts, consumers, homesteaders and horse owners.

The people opposing NAIS come from all walks of life and every part of the political spectrum. As a fifth-generation rancher stated at the

Austin meeting: "I find it kinda ironic that I'm on the same side of this issue as a bunch of these old hippies. But I am." In contrast, those supporting NAIS come from a very small handful of Big Ag and Technology interests. The USDA listening sessions are bringing this truth to light, and we must keep fighting.

People across the country have given strong statements opposing NAIS at these meetings. Some have spoken about their personal situations—whether as farmers, homesteaders, or consumers—while others have provided detailed critiques of the NAIS and USDA's plans. All have spoken with passion and dedication. The remarks of Kim Alexander (see sidebar below) of Austin, Texas capture the spirit of the fight. 

REFERENCES

1. Benefit-Cost Analysis of the National Animal Identification System, NAIS Benefit-Cost Research Team (Jan. 14, 2009) (hereinafter "Cost-Benefit Analysis") at Table 4.2 & 4.3, page 30.
2. Cost-Benefit Analysis, pages 28-29.
3. Cost-Benefit Analysis, pages 24-27.
4. Cost-Benefit Analysis, pages vi, 8, & 123-124.
5. Cost-Benefit Analysis, page 102.
6. User Guide at 30. See also Draft Program Standards, United States Department of Agriculture, Animal and Plant Health Inspection Service (published Apr. 25, 2005) (hereinafter "Draft Program Standards") at 5-6.
7. Cost-Benefit Analysis, page 23.
8. Cost-Benefit Analysis at pages 169 & 171.
9. USDA-APHIS Fact Sheet, National Animal Identification System Benefit-Cost Analysis: Three Key Points (Apr. 2009) ("Three Key Points from the Benefit-Cost Analysis: 1. A traceability system like NAIS is essential to timely recovery of export markets after a disease outbreak. 2. Traceability is becoming increasingly important, even necessary, for successful participation in the global marketplace. 3. For the major livestock industries, the costs of NAIS vary depending on the industry's production practices, which in turn determine the type of traceability methods used.").

NO NAIS, NO WAY, NOT NOW, NOT EVER!

I find it quite disingenuous that the USDA calls today a "listening session" when they have already made up their minds they are going to implement NAIS whether we want it or not. By their own admission in today's agenda, these sessions are to "overcome existing and new obstacles to implementing the NAIS." Furthermore, the USDA "seeks ... to create a program producers can feel 'comfortable' supporting." i.e. "may your chains set lightly upon you."

Their discussion sessions this afternoon will allow us "producers to provide ... input on 'ways to make the program into something we can support.'" How thoughtful and kind of you as you attempt to "erect a multitude of New Offices, and send hither swarms of Officers to harass our people, and eat out their substance."

Make no mistake; we know what you and the NIAA¹ are up to. You are out to deny us the basic, G-d-given human right to produce food free of government interference. To paraphrase James Madison: "it is proper to take alarm at the first experiment on our liberty. We hold this prudent jealousy to be the first duty of citizens. ..." The free men and women of America will not wait as your usurped power strengthens itself by exercise and you entangle the question in precedents. We see the consequences in the principle and we will avoid the consequences by denying you the principle.

Friends and neighbors, sons and daughters of the South, we will win this fight. We are the majority and we are in the right! The millions of farms, ranches, and backyard barnyards we represent provide real homeland security and food safety. We may have occasional, temporary setbacks, but we will win. We do not even need to be the majority. As Samuel Adams stated, "It does not require a majority to prevail, but rather a tireless minority keen to set fires in people's minds." Let the fire of liberty that scorches this tyranny once and for all start here in Austin, Texas and spread throughout this great land until freedom once again reigns.

USDA are you listening? Take this message back to Tom Vilsack and the rest of your minions: NO NAIS, NO WAY, NOT NOW, NOT EVER!

Kim Alexander, Austin, TX, 5/20/09. You can view the video of this statement, as well as the dozens of other statements made opposing NAIS, at <http://www.youtube.com/user/somervellcountysalon>.

1. National Institute for Animal Agriculture, the industry trade group that created NAIS in the 1980s and 1990s.



A Campaign for *Real Milk*

RAW MILK UPDATES

by Pete Kennedy, Esq.

The most significant developments since the last update have occurred in state legislatures. A bill that formally legalizes herd shares passed both houses in Tennessee and was signed into law by the governor. Another bill that would increase the availability of raw milk is close to passage in Vermont. The collapse in pay prices for conventional dairies appears to have made some state legislators recognize the fact that raw milk sales or distribution can be a viable way for dairy farmers to make a living.

At the national level, there has been positive news as well. This update begins with an account of the failed attempt to institute a nationwide ban on herd shares.

2009 NATIONAL CONFERENCE ON INTERSTATE MILK SHIPMENTS

The 32nd National Conference on Interstate Milk Shipments (NCIMS) conference met in Orlando from April 17 through 22. NCIMS meets every other year to update the Pasteurized Milk Ordinance (PMO), the model milk regulation adopted by almost all of the States governing the processing, packaging and sale of milk and milk products. Section 9 of the PMO stipulates that only pasteurized milk can be sold to the final consumer.

At the 2007 conference, a proposal was introduced to amend Section 9 to establish that “no dairy animal sharing or similar programs would be allowed as a way to bypass the intent of Section 9.” Passage of the proposal could have potentially meant a ban on herd shares in a majority of the States. The proposal did not have much support; so, instead of taking a vote, a study committee was formed “to look into means to prevent animal/herd shares and other practices used to circumvent food safety regulations.” The committee was to present its report at the 2009 conference.

When the Herd Shares Committee meeting

was held at the 2009 conference, the committee did not give a report and instead indicated that it would no longer pursue any attempt to prohibit herd shares. One committee member stated that the NCIMS conference had jurisdiction over pasteurized milk not raw milk. It appeared that the majority of delegates at the conference held this view and did not want to take a position on herd shares, leaving the issue for individual States to decide. The likelihood is that NCIMS will not consider the herd share issue again, removing a potential threat to raw milk distribution throughout the country.

The one order of business the Herd Shares Committee did have on its agenda was to hear Mark McAfee of Organic Pastures Dairy Company (OPDC) give a presentation on amending the federal regulation banning raw milk for human consumption in interstate commerce (CFR 1240.61). Mark has filed a petition with the FDA to amend CFR 1240.61 to allow for shipment of raw milk across state lines from one State where the sale of raw milk is legal to another State where the sale is also legal. Mark had submitted a proposal to NCIMS asking the conference delegates to pass a resolution supporting the FDA petition. McAfee knew his proposal had little chance of passing, but introduced it with the hope of starting a dialogue with the regulators and dairy industry representatives attending the conference. In this, he succeeded. While the Herd Shares Committee voted not to support his proposal, a number of State regulators and industry representatives interested in finding out more about OPDC’s raw milk business approached him during the conference.

However, one group of attendees who refused to speak with McAfee about raw milk were the representatives from FDA, maintaining the agency’s policy of not talking to anyone with an opposing viewpoint on raw milk.

The FDA has used NCIMS in the past as a

A Campaign
for *Real Milk*
is a project of
the Weston A.
Price
Foundation.
To obtain
some of our
informative
Real Milk
brochures,
contact the
Foundation at
(202)
363-4394.
Check out our
website,
www.
RealMilk.com
for additional
information
and sources
of *Real Milk*
products.

platform to press for a total ban on the sale of raw milk. With NCIMS dropping the herd share issue and the support among State regulators for NCIMS and the PMO to focus solely on pasteurized milk, we can hope that there will be greater resistance if FDA continues to push individual States to either ban the sale of raw milk or to make access to it more difficult.

FEDERAL BILL HR 778

An online petition has been posted at the Farm-to-Consumer Legal Defense Fund website (www.farmtoconsumer.org) in support of HR 778, a bill introduced by Representative Ron Paul that would effectively overturn the interstate ban on raw milk for human consumption (see *Wise Traditions* Spring 2009 issue). The petition enables signers to send a personalized email directly to their representative and both senators as well as providing the option of sending a copy to their local newspaper. Citizens living abroad are able to sign as well. For those without internet access, a hardcopy version of the petition for collecting handwritten signatures can be downloaded or requested at 703-208-3276. Supporters of the bill are also encouraged to call, fax and visit their legislators to ask them to become co-sponsors for the bill.

In promoting passage of HR 778, it is good to emphasize any of the following points:

1. The bill upholds consumer freedom of choice. The consumption of raw dairy products is legal in all fifty states. The bill enables consumers to exercise their legal right in States where the sale of raw milk and/or raw milk products is illegal or where there are no in-State sources.
2. The bill honors States' rights. Decisions about the safety of raw milk should be made

at the state and local level, not by the federal government.


3. The bill supports family farms by expanding their markets for raw dairy products. The bill increases the chances of survival for those dairies that are no longer able to subsist solely on the income from the dairy cooperative system.
4. The bill promotes the local food movement by connecting consumers with producers who happen to live just across state lines.
5. The bill would free FDA to focus on the pressing problems in our food system, e.g., such as tainted imports and under-inspected large-scale food processors.

As Congressman Paul stated in introducing the bill, "Americans have the right to consume these products without having the federal government second-guess their judgment about what products best promote health. If there are legitimate concerns about the safety of unpasteurized milk, those concerns should be addressed at the state and local level." Those with questions about the bill are encouraged to contact the Farm-to-Consumer Legal Defense Fund.

THE SHARON PALMER CASE

Good news from California. Sharon Palmer appeared at an arraignment before the Ventura County Court and had her case dismissed by the judge. [See *Wise Traditions* Spring 2009 issue for background on the case.] Sharon had earlier been charged with "processing milk or milk products without pasteurization" and "processing for resale milk or milk products without a license"—both felonies under California law. The March 11 hearing marked the third time Palmer had been arraigned; the Ventura County Prosecutor's Office did not send a prosecutor to any of the arraignments. The bad news is that under California law, the prosecutor has up to three years to reintroduce the charges against her. The Ventura County Sheriff's Department has yet to return any of the computers or business records seized during January 28 raids of both Sharon's farm and the home of her daughter Jennifer Prince.

For the latest developments on raw milk issues, go to www.thecompletepatient.com.

Those who have not joined the Farm-to-Consumer Legal Defense Fund are encouraged to do so. Membership applications are available online at www.farmtoconsumer.org or by calling (703) 208-FARM (3276); the mailing address is 8116 Arlington Blvd, Suite 263, Falls Church, VA 22042. 

VICTORY IN TENNESSEE

A bill formally legalizing cow shares has been passed by both the State House of Representatives and the Senate and signed into law by Governor Phil Bredesen on May 21. The bill simply states that nothing in the law "shall be construed as prohibiting the independent or partial owner of any hoofed mammal from using the milk from such animal for the owner's personal consumption or other use." The House sponsor of the bill was Frank Nicely (R-Knoxville, District 17); the Senate sponsor was Mike Faulk (R-Kingsport, District 4). Congratulations to Brentwood WAPF Chapter Leader Shawn Dady and Tennesseans for Raw Milk (www.tennesseansforrawmilk.com) for their persistent efforts —spanning several years—in getting this legislation passed.

STATE LEGISLATION UPDATE

CONNECTICUT. HB 6313, a bill that would have limited sales of raw milk to the farm only [see *Wise Traditions* Spring 2009 issue], died in the Joint Committee on the Environment. Raw milk can currently be sold in retail stores; a number of licensed dairies in the State derive over half of their raw milk sales from retail store transactions. However, HB 6312, a bill stipulating criminal penalties for the sale of “adulterated raw milk and raw milk products” was voted out of the Joint Committee on the Environment but currently is stalled in another committee. If this bill passes into law, cow share programs would become illegal in the State unless the farmer has a retail raw milk license.

NEW JERSEY. Assemblyman John DiMaio (R-Warren/Hunterdon) and State Senator Marcia Karrow (R-Warren/Hunterdon) have introduced companion bills to legalize the sale of raw milk in New Jersey. The Assembly bill is A621 (formerly A4424 filed in 2007); the Senate bill is S2627 and has been assigned to the Senate Economic Growth Committee. The bills allow a licensed producer “to sell, offer for sale or otherwise make available raw milk directly to consumers or retail stores.” The bills also allow raw milk licensees to sell raw milk products, specifically listing yogurt, kefir, butter, cottage cheese and raw milk cheese. In addition, the bills expressly legalize cow shares, stating that nothing in the law “shall...preclude a consumer, for the purpose of obtaining raw milk, and a farmer from entering into a contract for shared ownership of a cow and contractually prescribing the terms and conditions of milk production. If the contract is entered into pursuant to this subsection, no raw milk permit shall be required.” Under the terms of the bills, applicants cannot obtain a permit unless they sign an affidavit “certifying that no growth hormones will be used in the process of producing raw milk.” On May 11, the Assembly Agriculture Natural Resources Committee held a hearing on A621. After the hearing, Committee Chairman Nelson Albano (D-Cape May) was quoted as saying, “Our intent as a committee is to make sure that we do everything possible to help dairy farmers in the state of New Jersey. We cannot let this be a dying breed . . . we also have to make sure that consumers in New Jersey have the right to purchase something they can get in any other state.” The current ban on raw milk sales has cost the State’s dairy farmers substantial business in sales that have gone to raw milk producers in Pennsylvania.

NEW YORK. State Senator Catharine Young (R,C,I-District 57) has re-introduced Senate bill S2428 (formerly S6827 in 2008) while Representative Daniel Burling (R,C,I-Warsaw) has re-introduced A6610 (formerly A10870 in 2008); these companion bills would allow the sale of raw milk in retail stores. Current law permits only on-farm sales. Those selling raw milk at retail would be required to post a sign at the point of sale reading, “NOTICE: Raw Milk sold here. Raw Milk does not provide the protection of pasteurization.” The Senate bill has been referred to the Consumer Protection Committee and the Assembly bill has been referred to the Agriculture Committee.

VERMONT. H.125, a bill that would increase the amount of raw milk dairy farmers can sell from the current 12.5 gallons a day to 40 gallons, has passed both the House and the Senate and is awaiting the Governor’s signature. The bill establishes standards for the sale of raw milk for all producers with additional standards being required of those farms selling more than 12.5 gallons per day. Any farm that complies with the additional standards can sell milk through delivery as well. Under current law, sales can only be made at the farm. The additional standards include an annual inspection by the Vermont Department of Agriculture, Food and Markets and twice monthly testing by an FDA-accredited laboratory. All farms selling raw milk will now be required to register with the State regardless of the volume they sell.

THANK YOU FROM MARK AND MARYANN NOLT



A hearty thank you for all your support during our recent raw milk episodes (see *Wise Traditions*, Summer and Fall, 2008. Thank you for all the cards, letters and phone calls, for participating at the rallies and for your offers to help at the farm. Thank you for your contributions and understanding.

Special thanks to Lyn Rales and her son Matt for hosting the fund-raiser last summer. Thank you to the speakers Sally, Joel, Bill and others. Thanks for all for attending and your many contributions.

Thank you to our many loyal patrons for standing with us in our time of trials. This is life but we continue to strive for a better tomorrow. To everyone, your kindness was and continues to be greatly appreciated! Mark and Maryann Nolt and Family

Protesters at the hearing for raw milk dairy farmer Mark Nolt, who was subject to two raids by the Pennsylvania Department of Agriculture.

Healthy Baby Gallery



Although Colton's parents, Sara and Wayne Petsch, had no control over his birth mother's diet, he was fortunate to receive the best of nutrition from his adoptive parents. They fed him donated breast milk for the first two weeks of his life, and ever since then he has been on the raw milk formula. Here pictured at eight months, he is a very healthy, happy, active, robust little boy who has slept through the night since around three months. Says Sara, "We are very happy with how well the raw milk formula has worked for him!"

Antennae in tune with the world, a very alert three-month-old Ian Fergus McWilton is thriving on a combination of Mom's rich breastmilk and homemade formula. Mom consumed raw milk, egg yolks, paté, fish eggs, red meat and cod liver oil during pregnancy and is continuing the same nutrient-dense diet during breastfeeding.



Smiling in her sleep, four-day-old Aviana Hayden Skaggs has a lot to be happy about since her mother consumed a nutrient-dense diet during pregnancy!



Trevor Joseph Yoder, pictured at about six weeks old, is the twelfth child of Paul and Colleen Yoder. Weighing nine pounds, eleven ounces at birth, he got a good start on his mother's diet of grass-based raw milk and other farm products. His parents have an all grass farm in Apple Creek, Ohio, where they do herdshares and direct market all their farm products directly to consumers.



The parents of Oliver Emerson Corvera, pictured here at nine months, first learned about the principles of the WAPF when he was a few months old, and began implementing them right away. The family is deeply grateful for Abner Lapp's farm in Quarryville, Pennsylvania, which provides all their raw dairy. Ollie enjoys perfect health (without vaccinations), and is unusually social, curious and interactive. He continues to eat mainly mama's delicious breastmilk, but also enjoys raw milk, daily cod liver oil, locally raised pastured meats and eggs, organic seasonal produce and lacto-fermented foods! Oliver's mother spreads the WAPF word through her holistic nutrition practice, Earth/Body Balance (www.EarthBodyBalance.com).



Avery Victoria Seguin arrived right on time, healthy and strong over eight pounds. Avery's mom and dad prepared themselves for a year before conceiving, and Mom drank plenty of raw milk every day during pregnancy. Avery has been breastfed for over two years and loves a healthy WAPF diet. She is especially in love with her "milky," raw milk, straight from the farm. Avery is extremely happy and delightful to be around, wowing people with her wide vocabulary and profoundly deep thoughts already.



Eli Joseph Thompson at four months and twenty pounds. He was born to a WAPF-following mother and now has a diet of breast milk, egg yolks and high vitamin cod liver oil with butter oil. He is such a happy, healthy, and rolly-polly little man!



Please submit your baby and raw milk granny photos to Liz Pitfield at liz@westonaprice.org. Be sure to label photographs with the full name of the baby.

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GLOWING IN THE DARK OF NUTRITIONAL IGNORANCE!

Poster girls for sunshiney foods, Elizabeth Benner and Laura Villiante, co-chapter leaders for Rochester, New York, attract many conference attendees to the Weston Price table with their glowing radiance. The booth attracted considerable attention at the vegan/vegetarian event. Says Elizabeth, "Many came up to me saying how glowing I was. I replied that credit was due to all the sunshiney fats I consume. My diet is 80 percent saturated fat!"

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LOCAL CHAPTER BASIC REQUIREMENTS

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

OPTIONAL ACTIVITIES

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

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BRAZIL

Southwest: Alberto Machado 24 9956 9798, amachado@ism.com.br

CANADA

- AB Calgary: Riva Mackie rivamackie@gmail.com (403) 245-2462, <http://health.groups.yahoo.com/group/westonapricecalgary/>
Castor: Kathleen Charpentier and Richard Griebel (403) 882-3835, grebe6@telus.net
Edmonton: Lori Clapp (780) 417-3952, lifeworthwhile@gmail.com
Peace Country: Mary Lundgard (780) 338-2934, plundgard@telus.net or Levke Eggers (780) 568-3805, levke@telusplanet.net
- BC Stettler: Gayle Thoun (403) 740-6637, mc_5thou@xplornet.com
Enderby: Naomi Fournier (250) 838-0235, enderbywap@hotmail.com
Kamloops: Caroline Cooper (250) 374-4646, info@eatkamloops.org, www.eatkamloops.org
Nelson: Lorraine Carlstrom (250) 352-3860, lorrainer61@gmail.com
Sunshine Coast: Candice Spent (778) 991-3672, wholefoodsnutrition@gmail.com
Vancouver: Barbara Schellenberg (604) 988-6280, realfood@ethickitchenbc.com
- MB Narcisse: Gary & Debbie Chikowsky (204) 278-3640, gdchik@mts.net, <http://ca.groups.yahoo.com/group/westonpricemanitoba>
- NS Annapolis Valley: Shirley Scharfe (902) 847-1736, glscharfe@eastlink.ca
Cumberland & Colchester Counties: Silvana Castillo (902) 257-2428, silvanacastillo@ns.sympatico.ca
- ONT Barrie: Paul Ericson (705) 728-8748, paulsonntagericson@yahoo.ca
Cambridge & Kitchener-Waterloo: Christine Kennedy (519) 653-2396, cakeneddy@rogers.com
Greater Toronto Area – West: Corey Evans, (905) 608-9314, info@healthisfreedom.net, www.healthisfreedom.net
Huron Shores: Marcus Koenig and Jessie Koenig-Liang (519) 294-0599, makoenig@porchlight.ca
Ottawa: Gail Davis (613) 238-2782, gdavis@ncf.ca, Pascal Desjardins (613) 728-0662, slow2burn@hotmail.com, http://groups.yahoo.com/group/wapf_ottawa
Toronto (Downtown): Patricia Meyer Watt (416) 653-7112, b-healthy@rogers.com
Toronto (East): Joseph Ouimet (416) 439-4753, joseph67x@yahoo.com
- SK Regina: Sandra Brandt (306) 359-1732, brandt.s@sasktel.net

COSTA RICA

Turrialba and Central Valley: Gina Baker & Reinhold Muschler (506) 2556-8021, waldorfcostarica@yahoo.com

EQUADOR

Melissa De Leon Douglass, cookingdiva@gmail.com

Local Chapters

FINLAND

Tammisaari: Henrik Nyberg 358 (0)19-204 456, henrik.nyberg@makrobios.fi

GERMANY

Grosslangenfeld: Anita Reusch and Douglas Mitchell, 0049-(0)6555-242, anita@roylt.com

ISRAEL

Milka Feldman Ramat Bet Shemesh: Milka Feldman 972-77-320-0742

NEW ZEALAND

Auckland: Alison Ellett, (09) 420-8548, Alison@nzflavour.com
Christchurch/Canterbury: Dermot Kieran Whelan 0064 3 3519733 sundara12003@yahoo.com.au
Dunedin: Liselle Wood 03 478 0604, organicearth@hotmail.com
Hamilton: Brianna Fitzgerald & Rebecca Rogers 07 850 8008, thetraditionalkitchen@gmail.com
Invercargill: Sherry Elton (64) 3213 1156, sherry@sherryelton.co.nz, www.sherryelton.co.nz
Lower North Island: Susan Galea (64) 6356 5186, susangalea@hotmail.com, www.realmilk.co.nz
Nelson: Shari Lawson 00 64 3 541 8054, sharis@clear.net.nz
South Canterbury: Ingrid Weihmann 03 686 6613, onlynatural@paradise.net.nz
Wellington: Ian Gregson 64 04 934 6366, wapf@frot.co.nz, www.wapf.org.nz
NZ Resource List: Deb Gully, deb@frot.co.nz, www.diet.net.nz

NORWAY

Ames: Bjorn Solberg bjorn.solberg@gmail.com

PAKISTAN

Dr. Shagufta Feroz & Feroz Sharfuiddin 92-42-8484303, drsferoz@gmail.com

PANAMA

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SWEDEN

Vastra Gotaland: Elvira Kristensson 46 76 716 55 51, Elvira@all-natural.se

SWITZERLAND

Bern: Diana Boskma food.diana@gmail.com

UNITED KINGDOM

Bournemouth & Poole: Kelvin Snaith & Sarah Turner 07 71989 5015, kelvinsnaith@hotmail.com, sarah_alice_turner@hotmail.com
South West England: Ben Pratt 07952 555811, ben@nutritions-playground.com, www.naturalfoodfinder.co.uk



WAPF AT TOTAL HEALTH CANADA

Several chapter leaders participated in the WAPF booth at Total Health Canada, held in Toronto April 17-19.

LEFT: Patricia Meyer Watt, Downtown Toronto chapter leader with Tom Wloka.

RIGHT: Liz Pitfield with son Tomas and Sally Fallon Morell.



The Shop Heard 'Round the World

Dedicated to Helping the Consumer Obtain Nutrient-Dense Foods and Accurate Nutrition Information

FARM PRODUCTS BY STATE

CA

Grass-fed, ranch-raised natural light beef. Locally ranch-raised, in Orange County, California. No additives or preservatives. Not available in stores delivered to your door. Frozen in 1 1/2 pound packages. (714) 749-5717, 5Bar Beef. 10/2

DC

CSA: Hi-Brix, nutritionally dense, biodynamically grown kitchen vegetables, grass-finished beef, pastured pork, broilers and eggs. Openings for 2009 season in DC Metro area. Contact Allan Balliett, info@freshandlocalcsa.com (304) 876-3382, www.freshandlocalcsa.com. *10/4

IL

Come to our farm! Healthy, FAT, beef & pork, born and raised certified organic - no nitrates. Sides or cuts (as available) plus many other healthy foods. Chapter Leaders Dale Kelsey - sustainable producer receiving no government funds, no grants, no subsidies, & Eileen Kelsey, CHom. incorporating WAPF Nutrition with Classical Homeopathy (815)-239-1466. 10/3

IN

Raw milk cheeses, grass-fed beef, veal, whey fed pork. Also, a variety of fresh raw dairy products available as "pet food". 100% pasture fed cows. NO hormones, pesticides, antibiotics used. Available from the Yegerlehner's "The Swiss Connection" (812) 939-2813 www.swiss-connectioncheese.com, Clay City, IN. 10/4

MA

Babcia's Farm. Certified organic pastured chickens, turkeys, eggs and vegetables. Sourdough breads and other whole grain baked goods, lacto-fermented sauerkraut and kombucha. Lard and more. All poultry must be pre-ordered. Visit our farm shop or Hardwick Farmer's Market. Contact Melanie at (978) 355-4053. 11/1*

We encourage our readers to obtain as much of their food as possible from small farms and independent businesses.

MA

Misty Brook Farm offers certified organic raw cow's milk, beef, veal, pork, and eggs. Raw milk is available year-round from 100% grass-fed Jersey cows. Come visit our traditional mixed farm! Contact Katia Holmes at (413) 477-8234 or mistybrookorganicfarm@yahoo.com, Hardwick, MA 11/2

Robinson Farm: A diversified organic farm selling grass-based raw cow's milk, eggs, eggs, hay, seedlings, vegetables, perennials, flowers, grass-fed beef, humanely raised veal local cheese, yogurt and maple syrup. Farm tours by appointment. Visit our farm stand store open every day. Contact Pam Robinson: www.robinsonfarm.org, info@robinsonfarm.org or 413-477-6988 11/1

MD

Organically raised grass-fed beef, free-range eggs, and pastured chicken. Pick up from Potomac, Buckeystown or Emmitsburg (beef only). No hormones, antibiotics, or animal parts are fed. Beef never fed grain. Nick's Organic Farm, Quality Organic Products since 1979, Nick Maravell, (301) 983-2167, nickmaravell@comcast.net. 10/4

The greatest fine art
of the future
will be the making
of a comfortable living
from a small piece of land.
Abraham Lincoln

FARM PRODUCTS BY STATE

Windmill Meadows Farm, Washington County, Grass-based sustainable family farm. Our Focus: healthy, well-balanced soil produces healthy livestock on healthy grass for healthy, good-tasting food products. Grass-fed dairy, beef, goats, pasture-based poultry (broilers & layers). Availability to Washington DC markets, (301) 739-5258. 10/4

MI

Creswick Farms. Dedicated to raising healthy, happy animal—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, www.Creswick-Farms.com. 10/4

MN

Farm On Wheels offers animals raised on green grass & certified organic by MOSA. Nutrient-dense cuts of beef, lamb, chicken, turkey, goose, duck, pork, lard, butter & eggs. No corn or soy. Farmers Market year round in St. Paul, Prior Lake, Northfield, Linda (507) 789-6679, www.farmonwheels.net. 11/1*

NH

Certified organic dairy: raw milk, yogurt, cream and quark. Pasture-raised lamb, beef and chicken. Eggs and vegetables available, raw fermented sauerkraut. Call for more info: Luke & Catarina Mahoney, (603) 742-4084 Brookford Farm, Rollinsford, NH, www.brookfordfarm.com. 10/4

NJ

Fresh Vital Foods from fertile soil. A natural function of soil, sun, rain, and compost and traditional, sustainable farming. Brown eggs with orange yokes from chickens on grass pasture. Seasonal vegetables and Native American fruits & nuts: Persimmon, Pawpaw, Black Walnut, and Hazelnut. River Birch Micro Farm, 19 Forman Ave Monroe Township, New Jersey 08831 (732) 605-0444. 10/3

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FARM PRODUCTS BY STATE

NY

Biodynamic raw milk available through herd-lease program. Also pastured chickens and fresh eggs available. Pleroma Farm, Arthur Lups, Hudson, NY (518) 828-1966. 10/3

OH

Ber-Gust Farm - pastured, miniature Jersey dairy cows. All natural beef, pork, poultry and produce. Also jams, jellies, honey and apple butter. Waynesfield Ohio. 419-230-2195, 419-230-2194 www.ber-gustfarms.net 11/1

Sleepy Hollow Farm - grass-fed poultry (now taking orders), eggs and beef. Raw milk(certified organic) and raw milk yogurt available through our herd share program. Give us a call - we might be delivering in your area this summer, (937) 464-7505. 10/4

PA

100% grass-fed products: raw milk, cheese, butter, cream and eggs. Lancaster County, Willow Run Farm, Call(717) 656-1359 Eli and Sylvia King, 995-B Musser School Road, Gordonville PA 17529. 10/4

Bareville Creamery 100% Grass-fed offers farmstead Cultured Butter from our grass-fed cows.* **We will ship to you.** *\$6.00/ lb plus shipping, or visit our farm to pickup. Daniel & Katie Zook, Leola PA, (717) 656-4422. 10/4

Certified Organic Dairy. Raw milk cheese pastured chickens, turkeys, pigs, 100% grass-finished beef, beef & chicken broth. Call for more information (717) 786-8093, Green Hills Farm, John & Annie Esh, Quarryville, PA. 11/4

Certified organic grass-fed dairy. Raw milk cheeses, cottage cheese, yogurt, sour cream etc. from Jersey cows. Eggs from pastured chickens. Grass-fed beef, pork, chicken, rabbit and turkey. Call for information. **Will ship.** (717) 768-3437 Pleasant Pasture Organic Acrc. 11/1

Grass-fed Organic Raw Milk and dairy food: 100% grass-finished beef and lamb, pastured pork, chicken and turkey, wild Alaskan salmon, fermented vegetables, raw honey, maple syrup and more, Long Island drop, Paradise Pastures, Paradise, PA (717) 687-6346. 10/3

Green Ridge Acres offers pasture raised chick-

FARM PRODUCTS BY STATE

ens, turkeys, eggs, raw milk and dairy foods from grass based Jersey cows on our family farm. Farm fresh produce in season currently delivering weekly in Philadelphia. For more information, call 717-354-7082. 11/1*

New location for an attractive variety of quality grass-fed and free-range products, located near the Lancaster and Chester County Line. For more information and/or questions, please call (717) 768-3263, Elam & Linda Stoltzfus, Narvon Natural Acres, Narvon, PA. 10/4

Pasture raised raw milk and dairy foods. Also chicken, turkey, veal and beef, Nature's Sunlight Farm, Mark and Maryan Nolt, Newville, PA, (717) 776-3417. 10/4

Raw Dairy Products from our grass-fed Jersey cows. Eggs from our free-range pastured chickens. Beef from our own beef cows. Pork from our own pigs. Running Water Farm, Isaac & Mattie King, 1238 Clay Rd. Lititz, PA-17543, (717) 627-3177. 11/4

There's a NEW source for grass-fed meats in the Susquehanna Valley! Owens Farm moved from New Hampshire last summer. Offering grass-fed lamb, pastured pork, meadow-raised chicken, happy veal raised on a mama cow. Visit Owens Farm www.owensfarm.com Sunbury, PA (570) 286-5309. info@owensfarm.com. 10/3

Raw milk from 100% grass-fed cows, yogurt, eggs from free-range chickens, 100% grass-fed beef and raw milk cheese. Ira & Mary Beiler. (570) 278-5881. 10/3

Raw Dairy Products from our 100% grass-fed Jerseys. Free-range, grass-fed, chicken, turkeys. Suckling veal, whey-fed pork, and lard. We do not use hormones or antibiotics. Shady Acres, Glenn Wise, 8514 Elizabethtown Rd. Elizabethtown, PA, 17022, **Shipping Available.** (717) 361-1640. 10/3

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 lamb and pastured chickens, turkeys and eggs. No hormones or synthetics. On-farm sales. Wil-Ar Farm, Newville, PA. (717) 776-6552. 17/4

Try our aged Raw Milk Cheeses from our small

FARM PRODUCTS BY STATE

herd of Jersey cows. Baby Swiss, Jack, Herbal and Hot Pepper, Cheddar-Sharp and Garlic, Havarti and more. Wholesale and retail. Raw milk and pastured eggs, (717)-656-2261 11/1

Welcome to Family Cow Farm. Our grassfed cows, pigs and chickens, give us milk, cream, cheese, butter, ice cream, meat, eggs, and more for our family and friends. We also have some produce seasonally. (717) 786-0131. 10/4

TN

We are a family farm offering all-natural, delicious, grass-fed lamb, pork, beef and, chicken. We now offer Jersey heifers for family milk cows (gentle!!) Call (866) 866-3287. Ask for Justin or Liberty or email: toposoftheworldfarm@wildblue.net. 10/4

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. 10/3

The Conscious Bean is a holistic cafe for people to explore healthful ways of being. Come listen to our speakers, meet your local farmers, and enjoy our foods that follow nourishing traditions. (703) 757-BEAN, 10123 Colvin Run Road, Great Falls, VA 22066, www.theconsciousbean.com. 10/3

WI

Certified organic 100% grass-fed dairy products. Also salad bar beef, pastured pork, pastured chickens, and eggs. Natural sweeteners, On-farm sales. Located 20 minutes south of Medford or 42 minutes W of Wausau. Lowland Ranch, Adin Hoover, Dorchester, (715) 654-6488. 10/4

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HEALTHY PRODUCTS

BEEF, ALL NATURAL grassfed Texas Longhorn. Heat/serve beef shipped in 28oz cans, case of 12. Buy direct save with 50lb. box grind. Halves cut/wrapped. Jerkey, hot dogs, summer sausage, beef sticks. certified Texas Longhorn Beef, 35000 Muskrat, Barnesville, Ohio 43713, phone (740) 758-5050, www.head2tail.com. 10/4

BUTTER AND CHEESE - Nutrient rich summer gold butter and cheese from PastureLand Co-operative. Our products are made from the milk of 100% grass-fed cows grazing certified organic pastures in southeastern Minnesota. Shipping available. Call (888) 331.9115 for more information. www.pastureland.coop. 10/4

CERTIFIED, ORGANIC, SOY-FREE dairy, raw milk cheese, cultured butter, cream, yogurt, cottage cheese, colostrum. Also full line of grass-fed beef, pastured chicken, turkey and free-range eggs. Raw honey, maple syrup, and extra virgin organic coconut oil also available. Will Ship. Grazin Acres LLC (608) 727-2632 located 1 hr NW of Madison. 10/3

COCONUT OIL. Nature's Blessing - USDA certified organic. Discovered on my recent trip to the Philippines, this oil is wonderful! Coconuts are grown and processed on site within 8 hours, cold-pressed. The oil is clear with a wonderful mild flavor. Carrie Hahn, WAPF chapter leader (412) 531-4485. 10/3

GARLIC. Organic & Chemical Free as Nature intended. Whole cloves or dehydrated powder/chips. Erker Organic Farms, Burlington, CO. (719) 346-5026. *10/3

LACTO-FERMENTED VEGETABLES, raw, certified organic, locally grown. Dill pickles, sauerkraut, kimchi, ginger carrots. Sold/Shipped within Northeast only. See website for store list and mail order info. Contact: Real Pickles, PO Box 40, Montague, MA 01351, (413) 863-9063, www.realpickles.com, info@realpickles.com. 11/1

LACTO-FERMENTED VEGETABLES, cultured, 100% organic, by Immunutrition. Three delicious, raw blends - Garden, Sea & Sunshine. Ships throughout USA via UPS. Available in 32 oz. jars or try our Cultured Veggie Taste Tester with bonus pumpkin oil & sea salt. (877) 773-9229, www.culturednutrition.com. 10/3

LIFE ENERGY STORE: Nourish your body, heart & spirit! delicious nutritious foods: dark chocolates, coconut oil, flour and butter, sea

HEALTHY PRODUCTS

salts, seaweeds; pure supplements: herbal extracts; natural soaps: ceremonial herbs; and more nourishing, earth-honoring products to vitalize your health and well-being! www.LifeEnergyStore.com - 1.888.846.6412 - magic@lifeenergystore.com 10/2

MAGNETICO SLEEP PADS renew your energy while sleeping. Developed by Dr. Dean Bonlie, MagnetiCo is the only magnetic sleep pad backed by ten years of scientific research and designed to deliver the correct negative magnetic field to the body. Six-month satisfaction guarantee. Call Dr. Dave Morris at cell (559) 760-7618 for info. & clinical results. 10/4

NATURAL PRODUCTS. Life Energy Store: Nourish your body, heart & spirit. Delicious nutritious foods: pure chocolates, coconut, mesquite, agave, salts. Additive-free supplements. Natural soaps. More nourishing, earth honoring, healing products to vitalize your vibrant health and well-being! www.LifeEnergyStore.com (888) 846-6412 magic@lifeenergystore.com. 10/2

NUTRIENT-DENSE FOODS shipped anywhere in USA. Bone broth (frozen), cultured veggies, soaked nuts, coconut kefir, seasonal soups, kid-friendly snacks, granola all made with organic foods in accordance with WAPF ideals. Featured at the conference. www.Meanttobe-foods.com; (Seattle) (206) 604-1460. 10/4

ORGANIC, RAW SAUERKRAUT. Fresh, Raw, & Alive! Gold Mine's Fresh Organic Sauerkraut is abundant in friendly, living micro-organisms that are powerful aids to digestion and assimilation. Independent lab tests show 7.8 million CFU's of live lactobacillus and bifidobacterium species per gram - that's 468 million per 1/4 cup serving! Aged in special ceramic crocks that allow the growth of friendly flora in a safe environment, Gold Mine's sauerkraut is - according to the most discriminating "kraut connoisseurs" - absolutely delicious! Featured at the annual Conference of the Weston A. Price Foundation 2004-2007. (800) 475-3663 or go to www.goldminenaturalfoods.com. 10/3*

SPELT. Organically grown. Traditional Oberkulmer Variety. Our spelt is grown by a certified organic farmer. We ship anywhere in the US. We sell by the pound. Contact the Plain Grain Co. LLC for details: www.carasmaternalconnections.com, cara@carasmaternalconnections.com (248) 628-8646 (paypal accepted). 11/2

SERVICES

REMODELING. Michael's Remodeling, kitchen and bath design, basements, kitchens, decks. Serving Northern Virginia for 17 years. Michael Meredith (703) 764-956, Michaelsremodeling.com meredith848@yahoo.com. 10/3

INVESTORS NEEDED

INVESTORS NEEDED. Next Level Productions is seeking investors to complete its documentary film "Body Armor." The film follows the journey of individuals with chronic illnesses as they explore natural medicine and alternative therapies. Contact Gabe Golden. (310) 779-2816, Gabegolden310@yahoo.com. *10/4

EDUCATIONAL MATERIALS

ARTICLES NEEDED. NATIONAL DIRECTORY of organic food sources and other natural Health Products needs articles, new releases, recipes, and information about your products and services for further issues. Advertising available. Sample \$3. Buffalo Creek Publications, PO Box 397, Buffalo Lake, MN 55314. *10/3

CURE FORTOOTH DECAY. At last, the real truth about your teeth. How to prevent and halt cavities for life. Utilize the wisdom of Weston Price and Melvin Page. Buy the book, Cure Tooth Decay! \$29.95 www.curetoothdecay.com. *10/3

DVD of JOEL SALATIN. "Heal the Planet by Healing Your Plate," presented at the Florida launch of the Farm-to-Consumer Legal Defense Fund August 2007. About 2.5 hours. \$20 donation to local WAPF chapter, includes shipping to US. Email WAPFSarasota@gmail.com. *10/3

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FARMING/WAPF LIFESTYLE

COLORADO FARM seeks 2009 interns for minimum three months. Live at Sunrise Ranch and learn about raising nutrient-dense foods, leadership and community building. Raise produce and grass-fed beef in the foothills of the Rockies. Visit www.sunriseranch.org/farm or call (970) 679-4330. 10/3

DAIRY BUSINESS for sale in Southeast. Loyal customer base. 8 milking Jerseys, heifers, bull, milking equipment to supply 135 families weekly. \$40,000. Also 8 milking goats, 5 doe lings, buck, milking equipment to supply 40 families weekly, \$7,800. We will help you through transition. 23 acres sustainable farm, barn, outbuildings, creek, 5-bedroom off-grid home, \$260,000. eatreal@gmail.com. 10/3

DAIRYMAID/MAN WANTED in the tropics! Live-in work trade on small farm in rural Hawaii. Milk cow and goats, make cheese and garden in exchange for your own rustic solar living space and a share in all the great food. Est. 15-20 hours per week, couples ok. Beautiful area near ocean, fun, eclectic, 'alternative' neighborhood. Horse lover a plus, great artist retreat. Long term is ideal, will help you learn. Open and accepting attitude. 808-640-6080 or colicstop@gmail.com. 10/4*

FARMSTEAD FRESH INC. is soliciting investors to help with business expansion. The business is known for training sustainable dairy farmers in making gourmet quality 'One Step Above Organic' grass fed raw milk cheese, and marketing it. Web site: www.farmsteadfresh.com. 10/3

ORGANIC, LOCAL FOOD BASED CAFÉ for lease in Carlisle PA. Great opportunity for a skilled Weston Price oriented team. Complete green facility, turn key operation. Large network of local producers provide beef, chicken, dairy and eggs. take a look www.thegoodlifecafe.com Call David at (717) 243 4968 *10/4

SAWSOMME (SAW-SOM-ME): Sunshine - Air - Water - Soil - Ocean - Minerals - Microbes - Energies. Properly balances life's precious benefits. All are needed in agriculture to start, nurture and sustain life's requirements. SASE. Ed Heine, 14N446 Hwy 20, Hampshire, IL 60140. (847) 464-5987. *10/1

FARMING/WAPF LIFESTYLE

TN BED & BREAKFAST. Spend your next vacation on a working farm, LaBelle Acres in Jamestown, TN. Guests are welcome to fish in the ponds, fight chickens for eggs, or just sit on the porch rocker. Breakfast foods are supplied, guests are welcome to prepare them when they desire. For more information, call (931) 863-5594 or labelleacres@yahoo.com or <http://www.bedandbreakfast.com/tennessee-jamestown-labelle-acres.html>. 11/1

TN FARM FOR SALE 12+ acres with 21 more available. 2600 sq ft 7-bed/4-bath house with 24-panel solar power system, new energy efficient windows/insulation. On crystal-clear Cane Creek with fishing/swimming, located in Mennonite farming area, friendly neighbors with lots of farming experience. Large new metal barn, 60x40 workshop building, organic garden, crop fields, pastures, fruit trees, rotational-grazing field fencing. \$289,000. More info and photos: www.rogerwindsor.com/farm.htm. Call (931) 593-3113 *10/4

VERMONT FARM seeks 2009 apprentices. We integrate American Milking Devon cattle, pigs and chickens with growing and fermenting six tons of vegetables. Our grain-free cows support raw milk sales plus butter and cheese making. We focus on selling nutrient-dense foods while eating well ourselves! Learning opportunities include milking, bio-dynamics, natural livestock care. Positions available April to November, short and long term. Cabins, food, laundry, Internet access and lots of education. Call Doug Flack, (802) 933-7752, Flack Family Farm, www.flackfamilyfarm.com. Snailmail please. 10/4

Zimbabwean Farmer seeks to become involved in Biological/Organic Farming, either as a farmer or in the support sector or in research. I would be happy to send my C.V.(Resume) to the appropriate person. Please contact David Hartley by e-mail: chacmachacma@yahoo.com 10/3

PERSONAL

SPRINGTIME and man's fancy turns towards? Outdoor activities, organic fruit, free range chicken and of course Love! Single male 46 seeking single female 25-45, who holds the values of Weston Price in high regards. Chica-goland area but willing to travel. timmyd4@yahoo.com (630)350-1937. 10/4

HEALING ARTS

ANCIENT TRADITIONAL HEALING WAYS. Awaken vibrant health and well being in body, mind and spirit with extraordinary ancient teachings and effective self-empowering tools. Holistic counseling, energy healings, retreats. Discount for WAPF members. JoAnne Dodgson EdD, www.pathwaysforhealing.net, (888) 846-6412, joanne@pathwaysforhealing.net. 10/2

HOLISTIC HEALTH COUNSELING for women & families. Discover vibrant health with an integrative approach to wellness. Get inspired to: make an easy transition to traditional foods, heal naturally, and make gradual changes to improve your health and your children's health. At last, find the way of eating and living that really works for your body and your life! Try a FREE phone session or sign up for our free monthly e-newsletter. Hannah Springer, MS, CHHC (718) 490-2839, Hannah@EarthBodyBalance.com. 11/1

HOLISTIC Lifestyle Coaching and High-Tech Meditation Programs. Free trial coaching session! Discover personal power and new ways to grow with a dedicated listener and creative partner (CTA Certified, ICF Member). Convenient telephone or email appointments. www.HolisticDynamic.com" 10/4

HOMEOPATHIC Care for Babies and Children. Join the Kairos Network Homeopathic Study Group. Member of WAPF, NCH, HEAR, and the Catskill Medicine Wheel. Low cost, effective, very useful for self-care and home prescribing. Tutoring by mail for Study Group members only. Beginners welcome. Make this part of your prepared parenting program. Send SASE to: Liz Potter, 321 Wahl Road, Livingston Manor, NY 12758. 11/1

LIVE BLOOD CELL ANALYSIS is a handy and valuable window on the state of health or disease. This procedure has a powerful motivating effect to help others improve their diets emphasizing the principles of Weston Price. Have microscope, will travel. Contact Karen Myer, ND, at (262) 522-9993 10/4

OSTEOARTHRITIS? Effective all natural relief of Osteoarthritis. Try risk free for 60 days. Made from natural ingredients with no side effects. Helps rebuild joint cartilage. Eases pain of Osteoarthritis. Visit www.arthritisCure.nd or call (888)848-8994 11/1

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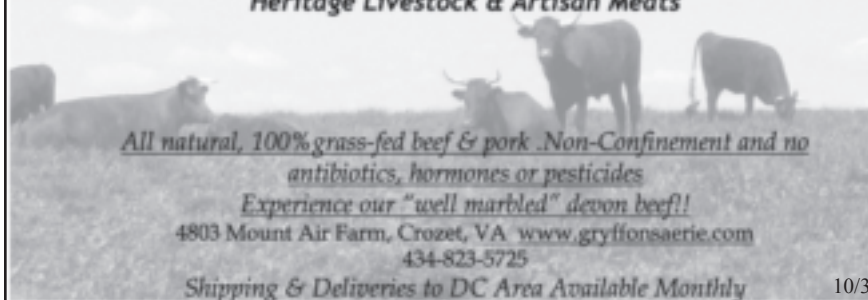
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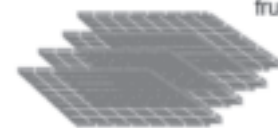
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INFORMATION



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Fish That We Eat *Iqaluit Niginatuat*

This manual by Anore Paniyauraq Jones is the second in a series of three detailing the traditional foods of the Inupiat. The first book in this series about Inupiat foods was *Nauriat Niginatuat, Plants That We Eat*, an ethno-botanical manual, long out of print but due to be re-printed in the fall of 2009 by University of Alaska Press. It is 150 pages with black and white photos and sketches.

The second manual, *Iqaluit Niginatuat, 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 *Iqaluit Niginatuat, 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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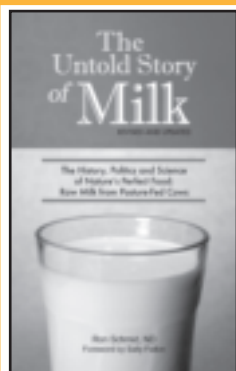
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- Sept 12** **Detroit, MI:** Growing Connections Conference and Harvest Festival at Kensington Metropark Farm Center. **Contact:** 248-828-8494, www.htnetwork.org.
- Dec 1-5** **St. Paul, MN:** Acres USA Annual Conference. **Contact:** (800) 355-5313, www.acresusa.com.
- Dec 4-5:** **Aberdeen, SD:** Seminar on Traditional Diets by Sally Fallon Morell. **Contact:** Julie Rosina (605) 649-7224, sdsavvygal@yahoo.com

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