



## **Hempseed: Nature's Perfect Food?**

***High Times*, April 1992, page 37, by Lynn Osburn.**

Modern medicine has defeated the most feared killers of antiquity like smallpox, tetanus and typhoid. Why can't it find a cure for cancer and heart disease? Is it possible the American diet is killing us? Is it true that hempseed butter can reduce the risk of cancer? Lynn Osburn, co-editor of the "Emperor Wears No Clothes" searches for these and other answers regarding the nutritional potential of hempseed.

In May 1991, as the California Hemp Initiative was fully underway, Jack Herer did a guest spot on a radio talk show in Los Angeles. One listener was a PhD biochemist from UCLA. Dr. Roberta Hamilton got in touch with Jack and arranged for a meeting to tell him about the nutritional value of the oils in hempseed. Jack asked Judy, my wife, and me to attend. We joined him at Dr. Hamilton's house near UCLA.

Dr. Hamilton, a talkative and intelligent woman in her sixties, invited us into her library. Jack was excited and wasted no time getting into the subject.

"What's so nutritious about the oils, the hempseed oil? You said they're essential?" he asked.

"Yes, linoleic and linolenic acids. They're essential. Life requires them. GLA, linoleic and linolenic acids, EPA, sunshine and protein high in phosphorus are all part of the battery of life. They assist the prostaglandins that..:"

Jack interrupted, "Whoa, wait a minute, what's this other stuff? Is any of it in hemp?"

Dr. Hamilton looked at Judy and me and said, "You're his editors. Do you know anything about these oils?"

"GLA is gamma linolenic acid, and EPA is eicosapentaenoic acid, I think, but it's been awhile. And don't the prostaglandins have something to do with immunity?" Most of what I knew had come from reading research about life extension.

“Good. You know what I’m talking about. You can fill in the others later,” she said. “It’s where Pritikin went wrong. He limited the oils in his patients’ diets. He didn’t know the oils were essential.

“These essential fatty acids are responsible for our immune response. In the old country the peasants ate hemp butter. They were more resistant to disease than the nobility. The higher classes wouldn’t eat hemp porridge because the poor ate it. To them hemp was low-class food.”

She discussed many interesting bits of biochemistry from the nutritional viewpoint and nutrition’s relevance to disease. But Jack wanted more simplification. He was concentrating on the CHI political campaign needed a short statement he could use in speeches and for the press.

“Dr. Hamilton - Roberta -- could you give me one line summing up the essential fatty acids in hemp that I could quote you on?”

“Yes. Hemp is the highest of any plant in essential fatty acids.” She went on to point out that hempseed oil is 55% linoleic acid and 25% linolenic acid. Only flax oil has more linolenic acid at 58%, but hempseed oil is the highest in total essential fatty acids at 80% of total oil volume. And hempseed oil is among the lowest in saturated fats at 8% of total oil volume.

I explained to her how important it was for our campaign to have documentation on the claims we made about hemp. She took a book down from her library shelf and said, “This book has in it most everything we’ve talked about today. You should get a copy.” The book was “Fats and Oils: The Complete Guide to Fats and Oils in Health and Nutrition,” by Udo Erasmus, a PhD nutritionist from Canada.

The next day I called Dr. Erasmus to order a copy of his book. When I told him we were very much interested in hempseed essential oil content, he became curious.

“Well, that is marijuana, you know.” He wondered why I was so interested in hemp.

“Hempseed is legal here in the United States. We can still buy it legally,” I replied. “We’re trying to get hemp back into the California economy, but first we have to legalize

marijuana. I'm a proponent for an initiative here to change the law so we can get hemp back."

He had a good laugh and wished me luck. Then he related remembrances his parents had told of the hemp fields in Russia and the delicious hempseed butter they used to make, "Their hemp butter puts our peanut butter to shame for nutritional value."

CHI failed to make the ballot. Jack had promised the volunteer petitioners an Extravaganja -- win or lose. Jack sponsored, and Judy and I hosted, the four day celebration during the full moon in June. The cannabis drought was so extreme that one CHI patriot proclaimed this to be a "Smokeless Extravaganja."

There may not have been any ganja, but there was plenty of hempseed food. Carol Miller of the Sonoma Civil Rights Action Project (SCRAP) and other hempseed nutrition enthusiasts brought their stone mills. Alan Brady, exuding a feeling of health and vitality affecting anyone near him, introduced many to the spiritual aspects of Zen seed grinding. His smile was contagious.

SCRAP had catered the first ever hempseed banquet at the San Francisco Earth Day Hemp Expo in April 1991. That was my first exposure to hempseed cookery. The meal was unique, but some diners had difficulty accepting the texture and taste of the Nutty Hempseed and Walnut Loaf. I found it to be satisfying, with a flavor that grew on you. My banquet favorite was the Chocolate Almond Hempseed Tort. The hempseed banquet left me with a sense of good health that lasted well into the next day-and I don't mean intoxication. Hempseed won't get you high, but the feeling of good health is an exalted state that few people in modern society experience anymore.

When the Extravaganja was over and the last of the CHI patriots had gone, we finally had time to sit back and relax a bit. I noticed how supple my skin had become. The chronic dry spot on my scalp had disappeared. After four days and nights of near nonstop hosting duties I should have been exhausted, but I felt quite content and contemplative. And since the birth of our youngest daughter, Judy had been experiencing painful breast swelling just prior to her menstrual period. Now for the first time in years there was no painful swelling. We had been eating loads of hempseed foods for the last four days. And we both remembered well the feeling of good health we had experienced after the hemp banquet back in April.

Brady had given us his surplus hempseed date and raisin bars. We continued to eat them and ordered fifty pounds of legally imported, sterile, Chinese hempseed from a national distributor. We believed it was the oil in hempseed that was responsible for our feelings of good health.

“Fats and Oils” was finally delivered to my mailbox a week after the Extravaganja. The book was so compelling I couldn’t put it down. The oils in hempseed had noticeably improved our health and sense of well-being. And as it turns out, the secret of life-giving health in those oils is the fulcrum of a shameful and deadly conspiracy perpetrated by the other oil companies -- the big time vegetable oil refiners -- the food oil companies (FOCs).

We have to look back to the turn of the century to learn what happened. American society was rapidly changing as more people departed rural-agricultural communities to become dwellers in densely-populated and fast-paced cities.

Getting large quantities of perishable foods to people in metropolitan areas was a difficult task. Spoilage and food poisoning occurred regularly. The advent of refrigeration solved many of the problems.

Food manufacturers sought alternatives to the traditional ways of small scale production on farms and ranches. Vegetable oil production was no exception. The hydrogenation process was patented in 1903, and Procter & Gamble marketed the first commercial vegetable oil shortening, Crisco, in 1911. Since then butter use has fallen to one-fifth of its 1910 consumption level, while margarine use has increased by a factor of nine. Vegetable fat consumption increased by more than 300% and animal fat intake went down slightly. Overall, total fat consumption increased by 35% from 1910 to 1980. Fifty-seven percent of this increase is from refined and hydrogenated vegetable fats and oils. Dairy products account for 7% and 31% is from meat, poultry and fish.

During that period, the cancer rate climbed from one person out of every 30 to one in five. The death rate from cardiovascular disease (CVD) was one in seven at the turn of the century. It is now the leading killer in Western civilization. One out of two Americans will die from CVD.

We eat a little less animal fat than our grandparents did. And we’ve been taught that it is healthier for us to eat vegetable oils. Our consumption of salad and cooking oils has increased 1200%. So why have cancer and CVD become our worst epidemics?

Vegetable oil production used to be a small scale industry even though seed oil crops were cheap and easy to grow. Because these raw oils spoil rapidly, batches were made weekly, often in home kitchens and sold locally while still fresh. This cottage industry employed many independent homesteaders throughout the country providing stability in local economies -- until large companies applied chemical engineering principles to food production. Then food technology was born. And the giant food oil refining industry came into being.

They didn't know it at the time, but refining the vegetable oils to retard spoilage changed the electro-chemical activity of the oils. The seed crops readily available to the FOCs contained high percentages of unsaturated fatty acids, now called mono- and polyunsaturates. Decades would pass before nutrition scientists discovered that we can't live without two polyunsaturated oils in our diet. Cis-linolenic acid (LA) and cis-alpha-linolenic acid (LNA) are the two the most susceptible to toxic rancidity upon exposure to light and air.

The FOCs could have overcome the problem of rancidity without making trans-fatty acids by simply cold pressing the oils into small airtight opaque bottles, but that was too expensive. Plus it is not possible to make vegetable fats like Crisco without hydrogenation in high heat. Their main goal was to make and market uniform stabilized vegetable fats and oils that undercut prices for food products made from animal fats. Mass production, volume storage and long shelf life were the major elements in the FOC battle plan. Their incredible success built the mega food oil industry of today.

Go into any supermarket and you will find shelves fully stocked with clear bottles of colorless oils. Light shines right through them causing free radical chain reactions to happen a thousand times faster than on exposure to air. But only the EFAs that weren't turned into trans-LA or transLNA after refining are affected.

Cheap generic vegetable oils look quite the same as the more expensive oils with polyunsaturated written in large print on the labels. Bottles of canola, corn, peanut, safflower and soy oils seem to offer the consumer a good selection of different vegetable oils to choose from, but the only variation they offer is in the percentage of trans-poly unsaturates, toxic compounds and free radicals each contains. And that depends on the amount of EFA in the seed oil and what percentage of the EFA was changed from the cis- to the trans- shape during refining. Manufacturers are not required to give the percentage

of trans-poly unsaturates in their oils or shortenings. And they do not have to account for the toxic polymers and free radicals either.

Today FOCs are enjoying the good press health journals give to polyunsaturated oils. But nutrition science has determined the bodily needs for cis-polyunsaturates -- not the trans-polyunsaturates. So the FOCs have applied their formidable economic power lobbying to make sure transfatty acids are treated the same as cis-fatty acids when nutritional guidelines are determined.

One pioneer nutrition scientist in Germany, Dr. Johanna Budwig, has proposed that trans-fatty acids are at the heart of cancerous tumor growth. Dr. Budwig developed new techniques to accurately identify the different fatty components in a mix of biological material. She systematically analyzed thousands of blood samples from sick and healthy people. Blood samples from people suffering from cancer, diabetes and some liver diseases consistently lacked the EFA cis-linoleic acid and substances which combine with LA: phosphatides, vital to cell membranes, and fatty acid carrying albumin, a type of blood lipoprotein. The blood lipoproteins containing LA plus sulphur-rich proteins were gone. In their place Dr. Budwig found a sickly yellowgreen protein substance.

She reasoned that if cancer is a deficiency disease involving a lack of EFA then feeding patients a diet high in EFAs should alleviate some of their problems. When she fed flax oil high in LNA and LA along with sulfur-rich skim milk protein to cancer patients whom traditional cancer therapy had failed the yellow-green pigment slowly disappeared; tumors receded and patients recuperated. It took about three months and during this time symptoms of diabetes and liver disease also disappeared.

Dr. Budwig has used her oil-protein combination therapy to successfully treat cancers of the brain, breast, liver, lymph and stomach; leukemia; melanoma; CVD; diabetes; acne and other skin conditions; weak vision and hearing; dry skin; menstrual problems like cramps and breast pain; glandular atrophy; fatty liver; gall stones; pancreas malfunction; kidney degeneration; immune deficiency; low vitality and many other ailments including arthritic conditions.

Dr. Budwig ran afoul of the FOCs when she discovered that fatty substances in soft tumors contained polymerized fats of marine animal origin. These polymers are formed when highly unsaturated fish and whale oils are heated to very high temperatures. She knew

these oils were used to make margarine, a partially hydrogenated fat that cannot be made without high temperatures.

The director of the institute where she worked had financial interests in margarine. He held patents on its manufacture including the hydrogenation processes that produced the toxic polymers she had found in tumors. He was afraid her discoveries would ruin margarine sales. He offered her money and ownership of a drugstore to keep her quiet. Dr. Budwig refused to be bribed, and in her official capacity made public statements warning people of the possible health hazards from consuming margarine.

Access to her laboratory was cut off. She was prevented from using research facilities at other institutes, and she could not get any more of her papers published in the fat research journals. This was astonishing because she had worked in collaboration with several hospitals, plus she held a high government post. It was her official responsibility to monitor the effects of drugs and processed foods on health.

Dr. Budwig courageously fulfilled her public duty in the face of FOC opposition and threats to her career. She left the government position in 1953 and opened the clinic where she has successfully treated cancer patients by nutritional therapy. Because this great woman was blackballed by FOC greed, EFA research has been slowed for over 30 years. Current investigations are merely following in her footsteps.

Cardiovascular disease and cancer are the greatest killers in modern society because we have become obese and malnourished. It's an insane paradox that most of the foods offered in the commercial marketplace ultimately fatten us up while our strength and vitality slowly shrivel and wane.

We eat too much junk food loaded with empty calories from starch, sugar, saturated animal fat and refined vegetable fat. Few would defend the nutritional value of junk foods. They're simply convenient.

A great deal of the foods we eat come from ingredients conveniently available at the supermarket. You can buy wheat flour by the five-pound sack. It's refined and bleached white. That means the protein, vitamins and fiber have been refined out of the grain; the starch remains. The human body is built with protein not starch. It can't make disease-fighting antibodies with starch. In fact, you can live without starch or any other carbohydrates including sugar. Excess carbohydrates your body can't burn outright or

store as glycogen in the liver are converted into sticky fats that can clog up your arteries. But sugar is delicious and a sweet tooth is fun to feed. If you're health conscious and concerned about what you eat, you have to look long and hard or go somewhere else to find any stone-ground whole-grain flour on the supermarket shelf.

You will have to go on a crusade not unlike the quest for the Holy Grail if you want to find food oils rich in cispolyunsaturated fatty acids. Food oil companies don't make cold pressed raw vegetable oils because the cisfatty acids -- the EFAs -- they contain are too unstable. Our bodies utilize that very instability -- that sensitivity to light and oxygen -- to enable the energy of life to flow through each of us. The high percentage of trans-polyunsaturated fatty acids in refined vegetable oils dampen the flow-of-life energy through our bodies, causing short circuits and brown-outs that eventually manifest as one or more of the degenerative symptoms of cardiovascular disease and cancer.

When I contacted Procter & Gamble to ask about the nutritional value and chemical content of the food oils and shortenings they manufacture, my call was immediately transferred to product nutrition information. However, the spokesperson was unable to answer any questions about the essential fatty acid content of their food oil products. Instead she offered to send me the free Procter & Gamble official product nutrition brochure.