

# The FELIX Letter

A COMMENTARY ON NUTRITION

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2001

## HE CHASED THE SHADOWS AWAY

John Vaughn remembers what happiness felt like when he was a normally high-spirited kid. Maybe a little too sensitive, but mostly happy. But a series of family calamities plunged him, age seventeen, into the first real depression of his life. It evolved into the bipolar kind: crippling gloom interspersed with interludes of elation, of feeling unbeatable, a veritable superman -- until he'd crash again. That's how it was for 35 years.

He's sent me his history and we talk on the phone. Vaughn's in his 50s, a businessman in Las Vegas, married to the same woman since 1973. He tells me without her he never could have made it. He was a fairly big-scale entrepreneur in Oregon in the '80s, "living high on the hog," then went thru bankruptcy in 1989. He and his wife worked at a killing pace for four years to pay off debts and back taxes.

All this time Vaughn suffered from bipolar disorder. It was with him when he joined the Marine Corps at age 19. Still with him when he left two years later.

The 1999 17th ed. *Merck Manual* says that in between depressive periods some bipolar patients in the manic phase become "inexhaustibly, excessively, and impulsively involved in various activities without recognizing the inherent social dangers...The need for sleep is decreased...Thoughts and activities are expansive and may progress into frank delusional grandiosity..." The *Manual* says doctors may find such symptoms hard to distinguish from schizophrenic ones.

## Misdiagnosed & Incarcerated

At age 24, Vaughn was misdiagnosed as schizophrenic and committed to a state hospital. He writes: "I spent two years there and experienced unspeakable horrors. I was given high doses of Thorazine, one of the early antipsychotic drugs. It had the effect of putting my mind in a straightjacket and made a zombie out of me." The drug left him disoriented. His speech became incoherent, his mouth dry, his muscles rigid. (Psychiatric interns who've taken a dose to observe its effect on a nonschizophrenic person report truly unbearable sensations.)

Vaughn writes: "This disease destroyed my life [for 35 years], turning me from a warm and friendly person into a social recluse, plunging me into an emotional abyss...I felt like I was wandering in a dark cave with no way out. How can you convey the profound depths of despair and emotional lassitude to

someone else? There are no chemical tests... no blood samples, no x-rays and no diagnostic exams that can adequately convey to the physician the state of mind that you are in....

"During the course of this disease I had been misdiagnosed on three different occasions. At the time I was in the hospital I was diagnosed as schizophrenic. Then years later I was diagnosed as OC, or obsessive compulsive; and some years after that I was thought to be depressive. Now I know that during the whole time I was actually bipolar manic depressive."...(He suggests psychiatry may still be an inexact science.)

## Meds Galore

Vaughn says he was given "the whole gamut of medications, from the tricyclics to the benzodiazepines, from the SSRIs to the MAO inhibitors, from lithium to Wellbutrin. In trying to understand the nature of this disease I've studied books on endocrinology, anatomy, physiology, abnormal psychology, biochemistry, and pharmacology. I've read psychiatric journals and queried psychiatrists on the biochemistry and etiology of this disease."

## Looking for the Light

Now comes the good part. John Vaughn is well now -- has been for almost three years. For 20 years Vaughn constantly searched for answers in 'alternative nutrition,' along with his forays into conventional medical literature. He read about Chinese herbs, became very conscious of nutrients, of importance of diet. He found he had allergic reactions to milk and to gluten in grains such as wheat, so he's largely avoided these. He tells me he's been taking vitamin and mineral supplements for many years.

E. NEEDHAMERK



THIS ISN'T OUR ANNIVERSARY--  
IT'S YOUR OTHER MARRIAGE.

## First Breakthrough

In 1997, articles in the March and April issues of *Life Extension*\* nudged him towards a supplement known as SAME -- short for S-adenosylmethionine. Our bodies normally make it from methionine, an essential sulfur-bearing amino acid. In fact, SAME is characterized in textbooks as the 'active form of methionine.' By linking up in our bodies with a high-energy ATP molecule, methionine can donate a methyl group (a carbon atom linked to 3 hydrogen atoms) to molecules requiring it for needed transformations. For instance, SAME's methyl donations, "methylation," allow the body to make **choline** (for the neurotransmitter acetylcholine, for phosphatidyl choline in cellular membranes, etc.), **creatine**, **melatonin**, **epinephrine**, **various amino acids**, etc. -- a veritable laundry list, including **specific DNA areas** that require methylation.

SAME affects so many functions it's hard to predict where failures would show up if there's a hitch in its synthesis.. It turns out, so far, SAME supplements may help to normalize poor liver function, protect against brain aging (recent European animal study), and improve joint problems in arthritis. More relevant to John Vaughn, over 40 studies since the late 1970s, mostly European, say SAME works effectively and safely against *depression*. As conventional a publication as *Newsweek* extolled these wonders in a 4-page article, July 5, 1999.

So Vaughn started taking 250 milligrams of SAME each day, starting in 1997. One of the few warnings in the literature is that SAME supplements may not work well for some individuals who have bipolar depression, perhaps even exacerbating it, but Vaughn gradually increased his dosage to 6 to 8 a day, and began to feel better.

"My attitude toward life improved, my outlook brightened. I felt more inner happiness -- something I hadn't experienced in a long time."

\*Published by Life Extension Foundation, an organization on the cutting edge of 'alternative' health and longtime battler for freedom of choice for consumers. The magazine loses points for objectivity by selling the supplements whose virtues it praises. On the other hand, it's got a bunch of real scientists and MDs on the advisory board and offers useful abstracts from medical research literature to back up claims. Tel: 1-800-544-4440. Online at [www.lef.org](http://www.lef.org).

Vaughn had been prescribed the tranquilizer Wellbutrin a while before, but good effects had been negligible. He was still having manic episodes and depression, along with side effects of muscle rigidity, impotence, and insomnia. After a few months on SAME, he stopped taking Wellbutrin.

On SAME, no medication, and "good nutritional supplements," his improved emotional state continued. Manic episodes ceased -- except, he said, when he'd stop taking SAME for a while, then renew large doses quickly. To avoid setting off a manic mood, he had to increase SAME very slowly after not taking it for a while.

### Still Searching

But the depression wasn't altogether lifted. One day in a health food store he noticed the book, *OMEGA 3 OILS* by Donald Rudin MD & me (published in 1996 by Avery, now published by Penguin-Putnam who bought out Avery).

"After all the pharmacological literature I'd read, the notion that a simple fat could accomplish everything Rudin described seemed absurd. Frankly, I thought he was three bricks short of a full load."

### Omega-3 to the Rescue!

The more of it he read, though, the more Rudin's theory made "nutrition sense as well as common sense." In early 1998 he started taking flaxseed oil, soon switched to salmon oil capsules. He was feeling better than he had in 35 years.

Vaughn is now settled into a regimen. He continues his adherence to good diet and nutritional supplements and at bedtime takes one 200 milligram SAME tablet, sometimes 1-1/2 tablets. His daily salmon oil intake is a whopping one: 17 capsules, each containing 360 mg omega-3 EPA and 240 mg omega-3 DHA -- 4 in the morning, 4 in late afternoon, and 9 at bedtime.

"When I've tried to lower the intake to about 10 or even 14 salmon oil capsules a day, I start feeling like I'm standing in ooze, slowly sinking in quicksand. I get drowsy, and the crazy thoughts and manicky moods begin. My ancestry is mostly English-Scottish, some German. I've read that my long-ago forebears depended on salmon as a big source of their protein so maybe my system needs a lot of omega-3s to be in balance, mentally and physically.

"I don't think I can be any more normal than I am now. I remember feeling like this when I was a kid and had the world by the tail."

### A Proper Warning:

None of the dosages that worked for John Vaughn should be thought of as my recommended guidelines! Bipolar mood disorder is plenty serious and should be treated by health professionals. The hope is they're the enlightened kind who also are up on research re nonpharmacological therapies -- herbs, nutrients, energy medicine, etc.

Readers who want to get in touch with John Vaughn can send me their letters which I'll forward to him.

Pickles/Brian Crane



### A New Look at Nutrient Therapy

There's real optimism on the horizon, ever since Andrew Stoll MD of Harvard Medical School and his group did the first double-blind placebo-controlled trial using the same number of fish oil vs olive oil capsules for 4 months with 30 bipolar disorder patients. Only side effects were loose stools in about half of the fish oil and the olive oil folks.

The fish oil group got 9.6 grams of omega-3s EPA + DHA daily (7 capsules twice a day). John Vaughn, nearly 6 ft tall and husky, gets 10.2 grams in his 3 daily doses. Not really much difference. Whatever works.

The results Stoll et al. got were such eye-openers that *Archives of General Psychiatry* published the study in May 1999, Vol. 56, earning special editorial comment in that issue plus worldwide news stories. A new, larger study by Stoll et al. is under National Institutes of Mental Health auspices. Stoll has a book coming out: *The Omega-3 Connection: How You Can Restore Your Body's Natural Balance and Treat Depression*.

### An Earlier Successful Study

To be sure, Donald O. Rudin MD had seen comparable wonders in a number of the 12 mentally ill patients in his 1-to-2-year 44-patient pilot study 20 years ago in a controlled but not double-blind trial using flaxseed oil. The psychiatric community wasn't open to his omega-3 theories, ignoring his journal papers and 1987 book *The Omega-3 Phenomenon* that I coauthored, as well as the 1996 update John Vaughn found in a health food store. A pity. Thousands, maybe hundreds of thousands of people suffering from all kinds of depression could have been helped by now. (Also heart disease, arthritis, dry skin, immune disorders, schizophrenia, etc. etc. -- but that's another story.)

Finally, we may be on the threshold of big change. Ironical, isn't it, that unpatentable molecules natural to the body plus essential fatty acids are taking the lead in healing bipolar disorder.

### About Supplemental SAME.

In FL#109 I wrote about abnormal homocysteine blood levels as a newly recognized prime culprit in heart disease, as well as in birth defects and possibly in Alzheimer's. SAME, after it donates a methyl group, eventually becomes homocysteine. No cause for alarm because normally homocysteine eventually gets transformed into the important sulfur amino acids cysteine, or methionine, the precursor of SAME.

But these transformations require certain vitamins or vitaminlike nutrients to make sure homocysteine doesn't stay around too long (bad news for the body). If a person takes SAME supplements, then after SAME does its charitable methylating act there'll be more SAME in the body turning into homocysteine. Hence, a logical way to avoid any homocysteine buildup is to take extra amounts of the nutrients involved in reconverting homocysteine into benign amino acids, right?

### Guidelines

One research study (*Am J Hypertension*, Jan. 2000, vol 13, 105-110) found these daily dosages effectively lowered plasma homocysteine in 101 patients with vascular disease: 2.5mg folic acid; 25mg vitamin B6; 250 micrograms vitamin B12. In other literature I've seen recommendations for adding trimethylglycine (betaine) to the mix. I don't take SAME supplements, but I do take daily one tablet containing:

- 15 mg vitamin B6
- 400 micrograms (mcg) folic acid
- 250 mcg methyl B12 (methylcobalamin)
- 500 mg trimethylglycine (betaine).

It's true, dear readers, for my income level (hah!) I spend an unreasonable amount of moola on supplements. However, I balance it by exercising great frugality with regard to face lifts, medications, and donations to the Republican party. □

### SEASHELLS AT THE SEA SHORE

I've suggested in other FLs that mollusks and crustaceans may have been reliable protein sources for our very early ancestors. Long before Oonga and Gronk could figure out how to catch fish, they surely would've used rocks to crack open bivalves from lakes, streams or seas the way baboons in the wild have been photographed doing.

The Jewish religion forbids eating shellfish, maybe because it was discovered millennia ago that shellfish could become toxic during warm months. My parents were nonobservant, but we never had shellfish in our diet. I only became interested after I'd stumbled on Dr. Rudin's startling papers in the early 1980s saying a widespread omega-3 deficiency might be doing us in. Not only did I tank up on flaxseed oil, but I began eating more fish. Then I learned shellfish contained omega-3 fatty acids, too, so I added calamari (squid) and scallops -- inexpensive compared with crab or lobster.

### Cats Love Shellfish, Too

Our neighbor's frail, elderly arthritic cat loved scallops, I discovered, and would climb slowly and laboriously up our back porch stairs each day for the little treat I laid out for him. My daughter and son-in-law who live in the low Santa Cruz hills began feeding little scallops to their majestic Himalayan-tabby Pawsley after I learned he, too, fancied these mollusks when I kitty-sat for my kids a few years ago. (Mollusks are a great source of the amino acid taurine that cats need.) However, Silky, the dainty calico they adopted as a kitten from the shelter last year, instead of eating the scallops tends to bat them out of the dish with her paw, knocking them around the kitchen floor like hockey pucks. Oh well...

### Also Ants

I've described in past issues how I've solved my ant infestation problem by establishing a feeding station in the garage, safe from mammalian marauders. I keep it well-stocked with honey and bits of either calamari or, yes, scallops, because during the 12 or more years of this experiment these have proven to be the ants' favorites -- more so than leftover lamb, chicken, even fish. (I learned, too, the ants secrete a fungicide and bactericide -- phenylacetic acid -- to keep their rations from decaying and smelling. A bonus for me.)

The day before, I'd put a 3 to 4-day supply of calamari and scallop bits in the little feeding station, pulled down the garage door as usual, and went upstairs to my apartment. Next morning, I was surprised to find most of the rations gone -- never happened before. I put in another supply, but by the next day it had disappeared. I suspected mice although I'd never seen droppings in the garage. Once more I refilled the ants' feeding station.

The third day, as I was about to yank up the garage door, out from the 2-inch gap at the bottom hopped a male sparrow. He looked up at me, very startled, and flew off in a hurry -- my tiny thief! Let's hear it for one more shellfish-loving species. □

Pickles/Brian Crane



### I NAG BECAUSE I CARE, HONEST!

Saw a big headline in the January 22nd *Oakland Tribune*: "Sunlight is dangerous to the skin, doctors remind us." A radiation oncologist advises "staying out of the sun between 10 a.m. and 4 p.m., wearing a hat, long-sleeved shirt, pants, and sun screen. The best prevention against skin cancer "is limiting exposure to sunlight."

Wait a minute. We've got Reinhold Vieth, Robert Heaney, M.F. Holick, and other longtime vitamin D researchers, stating bluntly many of us in northern latitudes are not getting enough sunlight to stay even marginally healthy!

Whom are we supposed to believe? And what are we supposed to do?

### Flawed Guidelines

Dr. Vieth's standout review in the May 1999 *Am J Clin Nutrition* shook up all of us in nutrition or medicine by proving that today's standards for vitamin D sufficiency are so flawed that so-called "normal" blood values practically guarantee a state of near-rickets for everyone in northern latitudes!

His review of hundreds of studies led him to conclude that blood levels of the vitamin D metabolite "25(OH)D" should measure at least 100 nanomoles per liter [nmol/L] to reflect adequate vitamin D status. Yet values above 90 nmol/L are misleadingly labeled as dangerously high!

What are some consequences of low 25(OH)D status? Would you believe osteoporosis, arthritis, and high blood pressure? Yes, studies show all three ailments improved when subjects increased their ultraviolet light exposure, vitamin D supplements, or both. The three disorders, incidentally, are higher in populations away from the equator.

### Cancer Protection

Moreover, research points more and more to vitamin D as a cancer fighter and immune enhancer. In the journal *Cancer*, 1999, vol 86, studies show that advanced stages of colorectal cancer in patients correlated with decreased blood levels of vitamin D. Conversely, high blood levels of the vitamin are associated with a big reduction in the incidence of cancer of the colon and rectum. Citing 8 recent studies, Vieth writes: "Epidemiologic studies show that higher serum 25(OH)D concentrations or environmental ultraviolet light exposure are associated with lower rates of breast, ovarian, prostate, and colorectal cancers."

### Vitamin D Affects Every System

All these good effects are tied in with the vitamin's roles in insuring proper calcium absorption from the gut, bone and tooth mineralization, and maintaining normal blood calcium levels. Plus, vitamin D is the agent that knocks off electrons to put calcium into its ionized state -- the only form our cells can use. Ionic calcium "is important for most functions of calcium in the body, including the effect of calcium on the heart, on the nervous system, and on bone formation," says Guyton's *Textbook of Medical Physiology*. That includes ionized calcium's role in helping every one of our cells to produce enough energy.

I'm not too keen about getting skin cancers.\* On the other hand, I'm not thrilled either at the thought of being vulnerable, by dint of inadequate vitamin D, to developing weak bones, hypertension, arthritis, poor immunity, and low energy -- let alone to getting nastier cancers!

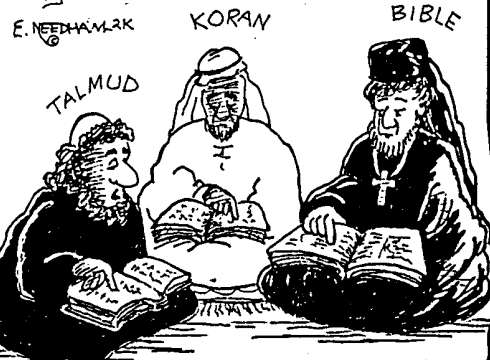
So, where do we go from here?

I don't think either suncreening or covering ourselves from head to toe is the answer, except temporarily to avoid serious sunburn. A little sunburn may be good for us. Researchers suggest sunburned skin makes a protein that kills gene-damaged cells that might otherwise become cancerous (*Science*, Aug 6, '99). Peeling following sunburn sloughs off these cells. Interesting!

For protection we're better off consuming plenty of antioxidant foods and supplements. Vitamins E and C, both internally and by topical application, substantially decrease skin cancer formation in lab mice, as do topically applied green tea and milk thistle (silymarin), both of which have antioxidant properties.

\* Basal cell carcinoma-- the commonest type-- grows slowly, rarely spreads, and can be removed by simple surgical excision or applying extreme cold (cryosurgery). Light-skinned persons are the most susceptible. Squamous cell is the next most common skin cancer; it, too, seldom metastasizes and is treated like basal cell cancer. Melanoma, though rare, is another matter because it tends to metastasize unless completely removed surgically. Although sun exposure is considered a possible risk, almost half of malignant melanomas develop from pigmented moles, often in areas of the body not regularly exposed to sunlight, e.g., legs and backs. Clearly, factors other than overexposure to the sun's rays must be involved.

COZZINS  
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WELL, DO WE ALLOW A McDONALDS OR NOT?



At the National E-Mail Addiction Rehabilitation Center.

I'm not opposed to broad-brimmed hats, nor to a little sunscreen on faces or balding scalps; I just don't like the idea of shielding arms, legs, etc. from sunlight when we have a chance to expose our body to what essentially are *healing rays*. It goes against nature, just as spending most of our lives indoors does. Glass windows, by the way, do *not* allow vitamin-D-making UVB light to pass thru.

The path I've chosen personally is this: on sunny days, as often as I can I try to spend an hour outdoors, arms and legs bare, broadbrimmed hat to shield my face. When that's not possible, I take vitamin D<sub>3</sub> supplements ranging from 1000 to 3000 International Units. (I expect more firms will provide the 1000 IU size as demand grows.)

I'm doing this because Dr. Vieth concludes from the research that **adults need 4000 IU daily**, from UVB light, supplements, and/or food.

Food is not a rich source. Fish, shrimp, and chicken liver are among the few foods that provide more than 50 IU of D<sub>3</sub> per 100 grams (~ 3.5 oz). (Canned sardines may have as much as 1500 IU.) Human milk and unfortified cow and goat milk have very little -- from 0.3 to 10 IU per 100 milliliters (~3 oz) -- telling us nature expects mammalian babies to get their vitamin D from sunlight, as we once did as a naked emerging species.

### Toxicity, Anyone?

I wouldn't have done this years ago because of the vitamin D toxicity scares. We were all misled! Here's what Vieth writes: *Throughout my preparation of this review, I was amazed at the lack of evidence supporting statements about the toxicity of moderate doses of vitamin D. Consistently, literature citations to support them have been either inappropriate or without substance.*

Three months after I began the above regimen my left knee became completely normal. It had resisted flexibility even with the best of supplements and avoidance of

allergenic foods. For the first time in eight years I can squat and do deep-knee bends. (And I'm eight years older, hah-hah.)

### Our Next of Kin

To all who are afraid of sunshine, here's a true story about Moja and Tatu, females in Roger Fouts' small colony of chimpanzees taking part in a remarkable longtime experiment: "speaking" American Sign Language (ASL). In the group is Washoe, the legendary female who was the first ape to learn ASL. Beginning in 1966, the infant Washoe lived with U. of Nevada psychology professor Allen Gardner and wife Beatrix, who first taught it to her. Fouts' chimp odyssey began in 1967, when as a graduate student he'd been hired by the Gardners to help care for 2-year-old Washoe and teach her ASL. Incidentally, no spoken language was used around Washoe, only sign language.\*\* Fouts became a passionate advocate for primates, our closest living relatives DNA-wise. In his book *Next of Kin*<sup>1</sup> Fouts tells how, beginning in 1980, he had been forced to house the colony indoors in windowed enclosures on the 3rd floor of the psychology building of Central Washington U. in Ellensburg WA, while he struggled to finance construction of an outdoor facility.

### A Happy Ending

The chimps missed their old home where they could be outdoors many hours a day. By 1991, "a mysterious illness" was progressively crippling Moja and Tatu. Moja was growing stiff in her joints and couldn't even grip the fence with her hands. Tatu, much younger, had constant diarrhea, her weight dropping from ninety to sixty pounds. "We enriched their diet and gave them plenty of supplements, in case they had a vitamin deficiency."<sup>2</sup>

But by 1993 Tatu could hardly crawl. A physician told a devastated Fouts to prepare for her death soon.

In May of that year all five chimps were moved to the new facility-- a vast grassy area with giant climbing poles and earthen terraces, "all enclosed in a wire-fence dome that vaulted thirty-two feet above the ground. Sunshine was pouring through the dome, flooding the grass below."

\*\* Chimps in the wild, except for hooting and shrieking, are mostly silent, using gestures and facial expressions as communication. Fouts tells us the chimp's thin tongue and high larynx make intelligible speech impossible. Interestingly, the human infant "is born with a vocal tract like a chimpanzee's and is incapable of speech." At five or six months of age, "the larynx begins its long descent into the child's throat (it will not achieve the adult position until fourteen years of age) but he will not control his tongue sufficiently to form his first word until he is about one year old."

1. *Next of Kin: What Chimpanzees Have Taught Me About Who We Are* by Roger Fouts with Stephen Tukul Mills. Introduction by Jane Goodall. New York: William Morrow & Co., 1997.

2. Vitamin D supplement recommendations for animals are warped by the same false toxicity alarms that led to the grossly inadequate RDA for vitamin D for humans. It's unlikely that Moja and Tatu's vitamin D supplement was adequate.

(Chimps, by the way, are white-skinned.) "For weeks, Moja and Tatu refused to come inside, even for meals. We had to beg and cajole to get them to eat. They spent so much time in the sun that their pale skin turned bright red. But Moja and Tatu didn't seem to mind being sunburned. They lived for the sun. By August, only three months after the move, Moja and Tatu were not only tan, they were physically and psychologically transformed."

Moja, who had spent her days lying on a bench, "was now moving skillfully across the walls and ceiling of the outdoor area." Tatu was "running, climbing on the fire hoses, and initiating tickle and chase games. She even regained all the weight she lost."

Weeks later, Fouts found the answer in a medical text. The chimps "had been suffering from rickets, a bone disease caused by a lack of vitamin D...Tatu and Moja were starved for direct sunlight."

[In the following, capitalized words represent a 'signed' ASL word, as they do throughout the book. The chimps had huge ASL vocabularies.]

"Even on rainy or snowy days Tatu and Moja plead to go OUT. One freezing morning during her first winter in their new home, Tatu waited by the door and signed GO OUT.

"SORRY VERY COLD, one of the volunteers responded. YOU MUST WAIT.

"GIMME CLOTHES, Tatu demanded. So we gave Tatu sweaters and out she went." □

Readers, write to me if you've perceived changes from increasing your sun exposure and/or vitamin D intake. Frankly, I think this parallels the hidden omega-3 deficiency story that Rudin uncovered 20 years ago.



Illustrations are by the late Clay Geerdes and other artists as noted.

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