

The FELIX Letter

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A COMMENTARY ON NUTRITION

2001

WHO'S MAKING BIG BUCKS FROM SICKNESS?

Wise use of supplements can serve as a partial shield against bad food choices; and, at the most, enhance the quality of health and life. At the least, it'd save a bundle in health care costs. You'd think financially beleaguered outfits that are leaking money like a sieve (HMOs ?? government agencies??) would have smartened up to this truth by now. I have to assume they're either stuck in a badly outmoded mindset, or are being outmaneuvered by the forces that fatten on ill health.

I can't think of any other reason why we're being fed a steady stream of 'Killer Vitamin' news stories. "Vitamin C Linked to DNA Damage, Cancer" was in a *S.F. Chronicle* headline on June 15. Ian Blair, lead author of the U. of Pennsylvania test tube study in same-day *Science* was quoted thusly: "If you really want to be cautious, you just wouldn't use supplementation (vitamin pills)."

Of course. They're the real danger, not the 'properly' prescribed and administered medications that kill over 100,000 people in the U.S. each year (*JAMA*, April 1998)--more deaths than from guns and cars combined.

Ask yourself: Who makes BIG money from illness? or, who loses if people stay healthy? No, I'm not talking about doctors -- they're not the ones reaping the outsize benefits.

My decision to take and recommend supplements is based on the work of scientists who examine nutrient actions and reactions in the human system, and the clinicians who employ nutritional therapy. Over the long haul I've seen impressive--and safe--results.

Sure, if we were gatherer-hunters in an untouched world, we wouldn't need the stuff we take now to make up for elements missing from our soils and waters, or to help neutralize the noxious chemicals bombarding us.

A Longer, Healthier Life

Repeatedly, the journals I read reinforce my convictions about nutrition's pivotal role in keeping us well. A report in April 14th *Lancet* says vitamin C

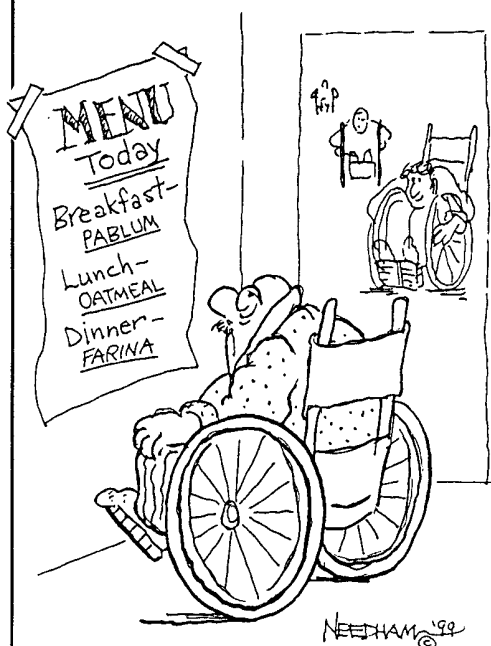
concentrations were "depleted in patients with peripheral arterial disease" and that individuals with low C concentrations performed poorly on treadmill tests, suggesting "functional capacity of the peripheral circulation (lower limb blood flow) is affected by vitamin C depletion associated with severe atherosclerosis."

(As usual, the researchers hemmed and hawed about using supplements -- fruits and vegetables would do it all. Sure.)

In March 3 *Lancet* a major study from Cambridge in the UK examined "for 4 years the relation between plasma ascorbic acid concentrations and mortality due to all causes, and to cardiovascular disease, ischaemic heart disease, and cancer in 19,496 men and women aged 45-79 years."

Their findings: "Plasma ascorbic acid concentration was inversely related to mortality from all-causes, and from cardiovascular disease, and ischaemic heart disease in men and women."

In other words, high blood vitamin C = longer life, less heart disease. For men, high plasma C lowered their cancer risk. (They offered a moderate caveat: "Whether ascorbic acid supplements are beneficial remains to be seen." Scientists who stick their necks out are foolhardy.)



Now, wouldn't you think this large study showing vitamin C saved people from disease and death deserved a news story? Not in the *S.F. Chronicle* and *Oakland Tribune*, both of which headlined the Killer C one.

She's My Kind of Doc

But the *Oakland Tribune* redeemed itself, on June 17 publishing "Viewpoint" by an East Bay physician, Kate Scannell, who writes, "Last year, prescription drug sales in our nation grew by 14.9 percent to \$145 billion...Brand name pharmaceutical companies spent over \$2.1 billion in direct-to-consumer advertising, a fraction of the billions spent on promotion...And while drug prices soar, the pharmaceutical industry has become the most profitable Fortune 500 industry."

They did this at the expense of 19.8 million Americans who "were exposed to five new drugs that the [FDA] rapidly removed from the market between 1997 and 1998 after serious, unexpected side effects were discovered with each of them.

"You must ask how so many people could have been exposed to so few drugs during such short shelf lives.

"The answers are: media hype, aggressive direct-to-consumer advertising of pharmaceutical drugs..., consumer demand, and the commercialization of medicine."

A superb Special Report by Howard Friel¹ in the March/April newsletter *Extra!* says "New York Times' Vitamin Coverage Could Damage Your DNA." It's a fine summary on deliberate distortion by major media like the *NY Times* of scientific findings. E.g., the *NY Times* took last year's report on antioxidant nutrients by the National Academy of Sciences and turned it on its head, misstating that supplements of vitamins C, E, and selenium not only won't protect against chronic diseases but could be harmful. □

1. The March/April 2001 issue of *Extra!* can be ordered for \$4 from FAIR-Sales, 130 WEST 25TH Street, NEW YORK, NY 10001.

CLEANING UP YOUR ACT

No one is a hero to his or her family. Add 'friends and neighbors' to the truism. (Truism: an undoubted or self-evident truth, *especially* one too obvious to mention [Webster's 9th]). Once, my (adult) son Josh read a newspaper columnist's enthusiastic appraisal of me, then said in all sincerity: "Gosh, mom, I didn't know you were so wonderful!"

Sorry, Dr. Berry, I didn't know *you* were so wonderful!

Linda Berry, D.C., is my longtime chiropractor whom I see for 'tune-ups.' We share ideas and mutual fondness, and I knew she was no lightweight, but I'm staggered by the scope of her book, *Internal Cleansing*.¹

To tell the truth, I didn't want to review it because I thought it would tell me fasting was the one true road to inner salvation.

Yecchh, I hate fasting -- I tried it once. Not for me: I adore good food; I've said farewell to a flat tummy 50 years ago.

No, this book is a guide to understanding health puzzles and working towards solutions. Berry points to the pressures shoving us towards below-par robustness, including *biochemical stress* from an 'unremitting barrage of chemicals' to which we're exposed; *electromagnetic stress* from radios, tv's, cellular phones, computers, microwaves, etc.; also *mental/emotional stress*. Re the latter, psychologists discovered "...the body cannot tell the difference between a 'real' threat and an imagined one. So the potentially stressful situations that you worry about every day are as harmful to your physiology as the actual stress you face."

All of the above spell potential toxic buildups in your bod. Berry's book lays out do-able procedures for undoing harm and minimizing assaults. Samples:

- Avoid microwaving food in plastic containers or with microwave plastic wrap. Reheat your food in ceramic or glass containers.
- Avoid allowing plastic juice and water containers to overheat (keep them out of hot cars and sunlight). If the liquid becomes heated, throw it out. Or, buy juice and water in glass jars and bottles.
- Indoor plants are particularly effective in filtering three chemical from the air that are responsible for many health problems: benzene, formaldehyde, and trichloroethylene (TCE). About 15 plants in an 1,800 sq.ft. house will help to combat indoor air pollution.

Of course, since the book is about *internal* cleansing, it's full of how-to's on achieving a pristine gut, minus leakiness and yeast overgrowth, replete instead with playful but helpful bacteria. Dr. Berry is a longtime flaxseed fan, for its fiber and Omega-3 content. She recognized early on that Omega-3s from flaxseed and fish were intrinsic to all life processes. In Appendix 2

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on Infant Care she tells why a baby's eyes and brain need Omega-3 DHA, deplores its current absence from U.S. formulas, and describes a safe way to supplement infants with a DHA product available in health food stores: Neuromins, made from ocean algae by farseeing scientists at Martek Co.

About psyllium: "No cleansing program can be successful without removing toxins from the colon, and studies have shown that no fiber is as powerful as psyllium husks for trapping and removing toxins. Imagine a sponge that expands 40 to 70 times its original size, with expanded scrubbing power....a soft, bulky mass that gently scrubs the wall of the intestines....it traps toxins and excess cholesterol and flushes them out of your body."

I'm thrilled to report Dr. Berry urges *caution* with fasting, since it "can damage the digestive system by starving the microvilli...Furthermore, during an extended fast you may lose lean body mass, which would cause wasting of your vital organs.." Yes! Way to go, girl!

Herb and fiber programs "cleanse your body without dramatically changing your current diet. This is the preferred method for many people who wish to decrease their toxic burden without making big lifestyle changes. My favorite program in this regard is the Yerba Prima Internal Cleansing Program; it is based on ancient traditions of herbal cleansing, yet it suits today's busy lifestyles." A detailed chapter gives the program's ingredients and how they work. Sources are in Appendix I.

Internal Cleansing provides a gentle guide for you plucky do-it-yourselfers. However for many individuals Dr. Berry recommends seeking out a "Health Coach System"² in your area, to provide educational materials and Health Coaches who are trained "to take you through cleansing programs using a modified elimination diet" and the healing foods described in the book. (She is one herself: 510-526-6657 or 415-456-1300. www.drindaberry.com).

Neighbors and friends *can* be our heroes.



1. Revised 2nd edition, 2000. Prima Publishing, 800-632-8676, or ask book store to order.)

2. Health Coach System: 800-761-0011 or www.healthcoach.com.

STATIN-TAKERS, BE INFORMED!

I'm truly blessed with gifted, alert readers. In *FL#114* I reported on Dr. Julian Whitaker's comments about one pharmaceutical firm having "patented the inclusion of CoQ10 [coenzyme Q10] in its newest statin. Significance: (a) the makers implicitly acknowledge that statins reduce your CoQ10 synthesis; and (b) their patents prevent all other drug companies from adding CoQ10 to *their* statins! P.S. He thinks this is grounds for a massive class-action suit by patients who've been prescribed statins without being given supplemental CoQ10." Heralded by huge magazine ads and rhapsodic tv commercials statins under a variety of brand names are today's drug of choice for lowering cholesterol.

On my desk is a packet from subscriber Raj K. Chopra, president of Tishcon Corp. in Westbury, NY ("Creative custom formulators of dietary supplements and OTC products"). His gently chiding letter tells me "the [two] patents to which Dr. Whitaker refers were issued way back in 1990 to Merck. There are, in addition, two other patents..."

All four patents were in the packet. The lead inventor of the two later patents (1992 and 1994) is Dr. Karl A. Folkers, who first elucidated CoQ10's structure in 1958. The 1992 patent describes greatly depressed CoQ10 levels in patients receiving lovastatin, and the association of serious, even life-threatening *cardiomyopathy* [abnormal functioning of heart muscle] with these depressed CoQ10 levels. The invention circumvents "this side effect by the clinical administration... [of CoQ10] concomitantly with the administration" of lovastatin.

What Statins Do Besides What They're Supposed To

All statin drugs reduce your synthesis of cholesterol by interfering with an enzyme (that you also make): **HMG-CoA reductase**. Dear readers, HMG-CoA reductase is a key enzyme in your body's production not just of cholesterol, but of one of your major energy-making molecules: Coenzyme Q10. I quote from Folkers' 1992 patent:

"...the present inventors utilize the heretofore overlooked and very serious

side effect of HMG-CoA reductase inhibitors to depress body levels of Coenzyme Q₁₀. Depressed levels of serum coenzyme Q₁₀ have been found by the present inventors to correspond to an increased observed incidence of cardiac dysfunction or the decreased pumping of blood by the heart throughout the body..."

What an absurdity -- a drug to reduce heart disease by lowering your synthesis of cholesterol, may cause *cardiac dysfunction!*

Dr. Karl Folkers et al. also have the 1994 patent for the use of coenzyme Q₁₀ in conjunction with virtually any of the family of substances known as HMG-CoA reductase inhibitors. (Apparently statin drugs are not the only ones that knock out CoQ₁₀.)

Inclusion of CoQ₁₀ will help to prevent "a variety of HMG-CoA reductase inhibitor-related physiological side-effects...[that] include cardiac dysfunction, liver dysfunction, immune system [dys]function, headache, flatus, abdominal pain/cramps, diarrhea, rash-pruritus, and eye dysfunctions."

Ye gads and little fishes! (An expression from my girlhood during the Civil War.) Your body goes to a lot of trouble to make CoQ₁₀. It's a component in the respiratory chain in the mitochondria of your cells. To quote one of Merck's 1990 patents: "It is thus an essential co-factor in the generation of metabolic energy and is particularly important in muscle function."

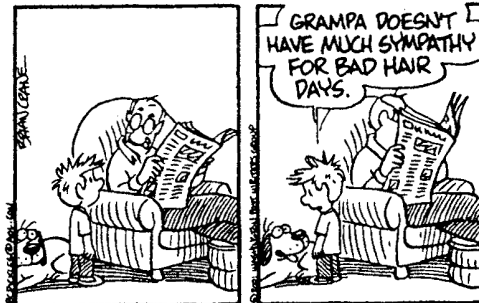
Known side effects of statins are muscle soreness and weakness. Heart muscle works all the time.

As noted, the big media push, including tv, is to get everyone and the family dog on statins. If you're taking any (Mevacor, Zocor, Lipitor, etc.), check whether your formulation includes CoQ₁₀. (If not, show this newsletter to your healthcare provider.)

Happily, CoQ₁₀ nonprescription supplements (approx. 30-100 milligrams a day) are like the CoQ₁₀ your cells make, are safe and not destroyed by statins or other meds. □



Pickles/Brian Crane



How to Feed Your Heart & Starve the Drug Companies

The April *American J of Clinical Nutrition* (Allison A. Brown & Frank B. Hu, pp 673-686) has a major review article, 141 references, on *nutrients* that specifically modulate how your "vascular endothelium" functions, and what this means in terms of *cardiovascular disease*.

The endothelium forms the lining of all your blood and lymphatic vessels, as well as of the heart. It's very dynamic tissue, responsible for maintaining your blood circulation and fluidity, modulating white blood cell and platelet adhesion, and for regulating your blood vessel tone.

Example: your endothelium releases molecules that can function as *vasoconstrictors* (e.g., thromboxane A₂). It also puts out substances (e.g., nitric oxide and prostacyclin) that act as *vasodilators*. "Vascular tone is determined by the balance between vasoconstricting and vasodilating agents in the environment surrounding the endothelium."

Research also focuses on a variety of *adhesion molecules* expressed by the endothelium. Inflammatory stimuli can trigger an outpouring of these adhesion molecules, to which white blood cells (leukocytes, monocytes) are attracted and will bind -- a process known as "endothelial activation." Normally, it's transient and fleeting. But chronic inflammation that stimulates chronic 'endothelial activation' can spur chain reactions leading to atherosclerosis.

"Endothelial dysfunction" goes hand-in-hand with cardiovascular disease. Smoking, hypertension, diabetes, and too-high homocysteine blood levels all are risk factors for heart disease, and *all create various kinds of endothelial dysfunction*.

For instance, smoking reduces nitric-oxide production, thus predisposing to blood vessel constriction -- bad news for your circulation.

Our Heroes -- Safe, Effective, Affordable!

The following *nutrients*, in food and supplements, showed an impressive research track record for the care and nurturing of your endothelium.

Long-chain Omega-3 (n-3) fatty acids headed the list:

In many trials, less endothelial activation and better vasodilation was seen in patients receiving 4 to 5 grams a day of EPA plus DHA. Adequate vitamin E supplementation was recommended; "a high dose of fish oil without adequate protection by antioxidant vitamins might induce proinflammatory responses and adversely affect endothelial function."

It was also suggested that "a specific ratio of n-3 to n-6 fatty acids is important in reducing endothelial activation." In other words, all-too-common dietary overloads of Omega-6 fatty acids interfere with potential benefits from Omega-3s. [See *FLs94/95* on easy ways to get a good n-3 to n-6 ratio in your diet.]

Antioxidant vitamins C and E also have accumulated an enviable record for reducing risk of heart disease. They reduce oxidative damage to LDL-cholesterol from free radicals, as well as scavenging free radicals throughout your body. But there's also "growing clinical evidence to support a favorable effect of antioxidants on endothelial function."

Vitamin C, for instance, improved endothelium-mediated *vasodilation* in chronic smokers, and in patients with diabetes and hypertension. Two grams a day for 4 weeks increased nitric oxide output and improved vasodilation in patients with heart failure.

Vitamin E supplementation "was also shown to improve endothelium-dependent vasodilation..." Good results were seen in heart patients on doses varying from 300 IU to 1000 IU a day.

"Taken together, the results of most of the studies support a role for vitamins C and E in preserving endothelium-dependent vasodilation when challenged with cardiovascular risk factors such as hyperlipidemia or in patients with diabetes or established [cardiovascular disease]."

Two more supplemental nutrients got gold stars from the reviewers:

Folic acid reduces excess homocysteine in the blood, remethylating it back to beneficial methionine. [See *FL#109*.] Homocysteine does bad stuff to your endothelium, lessens nitric-oxide output, increases platelet aggregation, etc. But folic acid, besides getting rid of excess homocysteine, benefits endothelial function via its antioxidant properties, and by increasing nitric-oxide output.

L-Arginine is a semi-essential amino acid needed in the enzyme your body uses to produce nitric oxide "and is therefore essential to the maintenance of proper vascular function." Used in persons with angina or high blood cholesterol, amounts ranging from 8.4 to 21 grams per day resulted in improved vasodilation and a welcome drop in white blood cells binding to the endothelium.

The following tickled me: "In several large epidemiologic studies, a high consumption of nuts was associated with a significantly lower risk of [coronary heart disease]. *The relatively high arginine content of nuts has been suggested as one of the potential biological mechanisms for their cardioprotective effect.*" [My emphasis.]

In summary, reviewers A.A. Brown and F.B. Hu (Harvard School of Public Health, Dept. of Nutrition) say "substantial evidence suggests that n-3 fatty acids, antioxidant vitamins, folic acid, and L-arginine have beneficial effects on endothelial function." The multiple, complex mechanisms by which these effects are achieved "may contribute to the role of these nutrients in reducing the incidence of [coronary heart disease] that has been observed in epidemiologic studies and some controlled clinical trials."

Yes-s-s!

Pickles/Brian Crane



Another worthy antioxidant

Alpha lipoic acid wasn't included in this review, but it's become a favorite of mine, in part because major research on it was done by one of my professors at UC Berkeley -- molecular and cell biologist Lester Packer, Ph.D. Alpha-lipoic acid is a co-factor in enzymes that convert food to energy. It's not a vitamin because you make it yourself, but output seems to decline with age. In addition to its role in energy production, Dr. Packer says in his 1999 book *The Antioxidant Miracle* that lipoic acid is the most versatile and powerful of all antioxidants. Not only does it exert antioxidant benefits of its own, it specifically 'recharges' vitamins E and C and the antioxidant glutathione.

Friend and researcher Paul Stitt sent me abstracts of current journal articles reporting on about 15 different disorders related to, or made worse by, oxidative stress, including Alzheimer's and macular degeneration.

So, you see it's not just your cardiovascular system you're protecting when you take in plenty of Omega-3s and antioxidants, both as food **and supplements!**

Someday, when medical outfits catch up with these concepts, they'll get their patients healthy faster and save a heap of money. And if multinational pharmaceutical giants and their media toadies thereby lose a heap....sorry, I can stretch my compassion only so far. □

A SHINING LIGHT

A quick word on my new passion--the vitamin we derive from the heavens and seas. A second blood test for 25-hydroxy vitamin D, three months after my first, put me in an improved but not quite optimal range: it rose from 25 ng/ml to 39. [Multiplied by 2.5, that's 97.5 nm/L.] I'm shooting for around 50 ng/ml [125 nm/L], as advised by Bay Area nutritionist Krispin Sullivan, who's been mentoring me. [See *FL#114*.] She tells me a *saliva test* for 25-hydroxy vitamin D will be available this year. I trust her book on D will be too.

I attribute improvement in my D status to (1) switching to fish-oil based vitamin D3 capsules; and (2) puncturing several capsules and rubbing them on my skin --

just in case the results on the first test had to do with poor oral absorption. Not very scientific, Krispin tells me, since I won't know if the oral route is working, or if improvement came about solely through topical application. She's right, of course, but I just wanted to get my D levels up fast.

Have I noticed anything? (1) I went through a humongous sleepy period for hours each day for more than a month. Not tired, but *so sleepy*, as in my pregnancies centuries ago. I seem finally to have snapped out of it. (2) I'm more limber. (3) My hair is filling in the thin spots I've had for years! I don't think there's any research on this.

Cheers and l'chaim! □



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

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