

# the **FELIX** Letter

A COMMENTARY ON NUTRITION

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1999

## AGING WITH PZAZZ!

What are the chief risk factors for killing us off *after* we've reached a respectable 65 years?

Or, conversely, which low risk factors make it easier to live longer and better?

Some of the answers surprised not just me, but the medical people who ran the big Cardiovascular Health Study (CHS).

The last place I expect to find results that are like arrows piercing the heart of standard doctrine is in *JAMA*! But there they were, sprinkled throughout the February 25, 1998 report of a truly *major* research effort by prestigious institutions.

**Purpose:** "To determine the disease, functional, and personal characteristics that jointly predict mortality in community-dwelling men and women aged 65 years or older."

To this end, in 1989 and 1990 a total of 5201 men and women 65 years or older (mean age 73) were recruited in 4 U.S. communities. A "supplemental cohort" of 685 African Americans was recruited in 1992 and 1993 from 3 of the communities. Those excluded were wheelchair bound in the home, or otherwise unable to participate in the huge battery of tests at various field centers, or undergoing active treatment for cancer. Otherwise, no one was excluded even if tests showed chronic disease at the start ("baseline").

Participants were re-interviewed every 6 months; deaths were confirmed by medical records, etc. After 5 years of follow-up, 646 had died.

### Risk Factors, Plus or Minus

**Note:** *High mortality = died sooner; low mortality = lived longer.*

Okay, some of these were commonsensical.

• **For instance**, people who had incomes of \$50,000 a year or more lived longer.

• **Folks who smoked 50 or more "pack-years"** had double the death rate of those who smoked less than 26 "pack-years."

• **Vigorous exercisers** kept the Angel of Death at bay lots better than couch potatoes did.

• **Just being female** was a big plus. "Men had a 2.3-fold higher risk of mortality compared with women..." (Little choice there.)

**More high mortality risk factors, all based on tests at baseline:**

• **Low "Forced Vital Capacity"** -- meaning lungs couldn't hold optimal amounts of air.

• **High fasting blood sugar.**

• **Low albumin**, an important blood protein.

• **High blood creatinine.** (Can denote muscle breakdown and other disease processes.)

*Folks with these baseline cardiovascular problems also died sooner:*

• **High brachial (arm) pressure** (above 169) coupled with low posterior tibial artery (leg) readings (below 127).

• **Stenosis** (narrowing of opening) of aorta. Same problem in internal carotid artery. The worse the stenosis, the higher the death rate.

• **Congestive heart failure**, the term for weakened heart muscles not pumping enough.

• **Major abnormality** on electrocardiograph.

*Here's an intriguing parameter:*

• **Participants were given the Digit Symbol Substitution test**, assessing visual-motor speed and coordination, visual search, and cognitive flexibility. Folks who tested with high scores had almost half the risk of mortality of those with the lowest ones!

### Surprise, surprise!

Okay, except for the last, no unexpected. Now come the blockbusters. (It *should* send policy setters back to the drawing board, but it won't.)

• **Diuretic use was associated with 67% higher risk of mortality.**

• **Low weight was associated with higher mortality risk.**

• **Obesity was not associated with higher mortality risk.** Actually, the heaviest men (more than 190 lb) and women (more than 168 lb) had almost *half* the mortality risk of men weighing 142 or less, and of women weighing 115 lb or less.



• **Contrary to all notions**, folks with higher LDL cholesterol (more than 153 mg/dL) "showed two-thirds the mortality risk" of those with levels of less than 96 mg/dL -- the supposedly desirable levels!

• **Blood levels of HDL cholesterol and total cholesterol** "were not associated with mortality at any point..."

Well, if that don't take the rag right off the bush, as my Wyoming friends used to say.

What's to glean from the above, even though it's only one study?

### Exercise!

The good results motivated me to get off my duff and do "crunchies" (semi-situps for back and abdomen) more regularly. Also, my kids got me a little bedroom trampoline so now I try to do 15 minutes of jogging (with 3-lb weights) *almost* daily. Swimming laps again, now that spring is here after the dreariest Bay area winter in memory.

**More motivation:** Exercise--mental *and* physical--*promotes growth of new neurons in the brain, those responsible for learning and memory!* Yes, in the elderly, too. Separate studies from Fred H. Gage at Salk Institute for Biological Studies and from Elizabeth Gould at Princeton University are putting to rest the old maxim that we're stuck with the brain cells we accumulated around toddler age. Vigorous exercise like running appears to be especially productive. (Okay, I'll push myself to trampoline-jog more faithfully!)

### Less reliance on diuretics for hypertension

It's too easy for MDs to put patients on diuretics, then to brush off complaints about dizziness, lethargy, etc. These medications lead to losses of numerous vital minerals, but usually only potassium is replaced. I reported on a study in 1996 (*FL* 87) showing that (nonprescription) potassium bicarbonate worked just fine for people with moderately high blood pressure. But, alas, it's not a patentable medicine so no drug company is extolling it, sending samples to MDs, etc. In the same issue, regular exercise also worked like a charm to normalize pressure, according to a study in *New Eng J Med*, Nov. 30, 1995.

I went into greater detail in *FLs* 77/78 (1994), describing nutrition-based factors to keep blood pressure normal--too many to repeat here, but I'm glad to send this double issue for \$3, or \$5 if you'd like #87 too.



## Chubbiness vs Skinniness in Golden-Agers

I love this one! It goes against most other studies, but makes a certain kind of sense. Chubby people are eating more and getting more nutrients, maybe even omega-3s once in a while. They're probably enjoying life more too, since eating is one of its reliable pleasures. Of course, some of the thin ones may have gotten that way from ongoing illnesses. On the other hand, if thinness was a result mainly of joyless denying of good food, rigid dieting, etc.....

## Cholesterol & All That Jazz

Oh, boy, are we ready for a new paradigm! My files going way back present a decidedly mixed bag of results from studies attempting to codify cholesterol levels with health.

Two newer trials of "statin" drugs (pravastatin, simvastatin) showed drops in cardiovascular deaths, but no increase in deaths from cancer, violence, or suicide which had soured the premature jubilation about previous statin trials.

## Statins vs Cholesterol

They cause blood cholesterol to drop by interfering with your body's natural biosynthesis of cholesterol. Cholesterol is the precursor for all your steroid hormones, i.e., sex hormones, cortisols, and glucocorticoids. It's a great part of normal brain tissue. Sunlight converts cholesterol in your skin cells to vitamin D. Some cholesterol is converted by the liver into bile salts, which emulsify dietary fats and oils. Cholesterol is a stabilizing presence in all healthy cell membranes. Egg yolk is full of cholesterol, plus phospholipids like lecithin, because a chick embryo has to have these to grow a normal brain and body.

The same drug action that inhibits cholesterol synthesis will also interfere with your biosynthesis of the cellular energy molecule, ubiquinone, known as coenzyme Q10. Warnings and potential adverse reactions listed in the PDR for all statins

include: muscle pain and weakness, muscle breakdown, abnormal liver function, renal failure, reduced testosterone, loss of libido, impairment of fertility, endocrine failure. Dogs given doses that caused 30 times higher blood levels than typical human responses suffered from optic nerve degeneration and hemorrhage in the central nervous system. Liver cancer and lung tumors were produced from longterm use in mice. All this beside the usual 'trivial' side effects of headache, vertigo, memory loss, etc.

## Losing Your Mental Zip?

After finding small decreases in dexterity and alertness in patients receiving statins, Matthew F. Muldoon of the Univ. of Pittsburgh is doing special testing to learn if these drugs dull the mental edge, possibly making patients more prone to car accidents, etc. At a November 10, 1997 meeting of the American Heart Association (AHA), Dr. Muldoon speculated that cholesterol-lowering drugs might reduce mental functioning by reducing the amounts of nutrients carried by cholesterol to the brain!

## Low Cholesterol & Depression?

The January 8, 1993 *Lancet* described a study of over 1,000 men in which those over age 70 with low cholesterol were three times more likely to show signs of depression than those with higher cholesterol. (They were not taking statins.) The researchers recommended limiting cholesterol-lowering diet or drugs to people at high risk of heart disease.

## The New Pharmaceutical Thrust

But that's not what's happening! The big guns at the November '97 AHA meeting were ecstatic about a new lovastatin (Mevacor) study in healthy men and women at little risk of heart attack. Cholesterol had dropped from around 220 to 184 and after 5 years there were fewer heart attacks than in the placebo group. The *S.F. Chronicle* wrote: "Researchers said the findings mean that cholesterol medicines should be considered for an additional 8 million Americans who until now would not have been thought to need this treatment. These drugs typically cost about \$100 a month." Research was paid for by Merck & Co., makers of Mevacor.

## The Caring Folks at AHA

Most *Felix Letter* readers, I suspect, tend to be skeptics like me about pharmaceutical miracles, having witnessed the noisy heralding of many over the years only to learn of their subsequent (very quiet) dumping on the industry's ash heaps. What has me gritting my teeth about the statin story is the fervent embrace accorded its use by the leading medical organization promoting heart health, the AHA. How does the AHA react to natural remedies, the non-invasive, inexpensive, non-patentable kind?

The April 1997 *Am J Clinical Nutrition* (pp1083-6) offers the AHA's nutrition committee's Science Advisory on "Fish consumption, fish oil, lipids, and coronary heart disease." It begins:

"Reducing intake of saturated fat and dietary cholesterol and avoiding excess calories, which can lead to obesity, remain the cornerstone [sic] of the dietary approach to decreasing risk of atherosclerotic vascular disease.\* During the past 20 years, however, there has been renewed interest in other dietary components that might favorably improve lipid profiles and reduce risk of coronary heart disease (CHD). Fish and fish oil, rich sources of omega-3 fatty acids, have sparked intense interest in both epidemiological studies, which suggest a favorable effect on CHD, and metabolic ward studies, which show a striking improvement in lipid profiles in hyperlipidemic patients."

So far so good. The Advisory goes on to list some documented benefits of omega-3 fatty acids, as well as evidence of a potential role in preventing "ventricular fibrillation" -- fibrillating heartbeats causing sudden deaths, often in persons who didn't have CHD.

And here are the AHA Science Advisory's conclusions:

"...inclusion of marine sources of [omega-3s] in the diet seems reasonable because they are good sources of protein without the accompanying high saturated fat seen in fatty meat products."

Wow, I mean that's really revolutionary. Imagine -- it's okay to eat fish!!!

## But no fish oil capsules!

"... evidence for beneficial effects in CHD patients is either lacking [Are these folks for real?!] or needs additional study. Currently, fish oil capsules can only be recommended for the infrequent patients with severe, treatment-resistant hypertriglyceridemia who are at increased risk for pancreatitis. Potential side effects should be kept in mind..."

(Slight pause while I tear my hair out.)

## Some perspective, please!

Dear readers, at your local library you can find the various statins listed under "Hypolipidemics" in the Product Category Index of the *Physicians Desk Reference* (PDR) if you think I'm exaggerating their side effects and potential dangers. Yet the statins are accepted by the AHA as the perfect weapon in their Anti-Cholesterol Crusade.

Now we're being warned by the AHA's Science Advisory about *real* side effects -- from fish oils! My comments in *italic*:

**Fishy odor, gastrointestinal upset.** [*Some people can't handle fish oils. Most can. Typical dose 1/2 tsp.*] Increased bleeding time may result in nosebleeds, easy bruising. [*All recent studies refute this.*] Can increase cholesterol in those with combined hyperlipidemia. [*1997 Norwegian study shows just the opposite, i.e. improved lipid profile by AHA standards. Am J Clin Nutr, Sept 1997, pp649-659.*]

**Can increase calorie intake and hence weight gain.** [*5 large caps contain a teaspoon oil, or about 38 calories, f'crying out loud!*] Some preparations have added cholesterol. [*Heaven forbid we should eat cholesterol, as in liver, other organ meats, eggs, milk, butter, meat, chicken, fish, shellfish, and all such dangerous foods.*]

**Some lack vitamin E; concern for oxidation.** [*Buy the kind with vitamin E, or take supplements -- wise people take extra E anyway.*]

**Some fish oils (not highly refined) may contain pesticide.** [*Fish oil preparations are made in pharmaceutical labs, which diligently remove pesticides, etc. The same is not always true of fish, alas.*] Various parameters of immune response are decreased (uncertain significance). [*Are they referring to big drops in inflammatory reactions -- a primary benefit from omega-3s??*]

**Vitamin A and D toxicity with some preparations.** [*Do they mean cod liver oil? How many cod liver oil deaths have they encountered? Most fish oil capsules are from body oil of fish, not the liver, and have little A and D.*]

**Cost:** Expensive compared with dietary fish intake. [*No comment!*]

**Precautions, warnings, adverse effects, etc.** for Mevacor (Lovastatin) fill 7 long columns of tiny print on more than two pages. These don't worry the AHA.

**Fish oils do.** That's rich, considering fish oils always were used worldwide (except in the U.S.) for canned fish! Replacement with soy & other oils is fairly recent. □

## A FAULTY PARADIGM!

Here's more on the conventional medical-nutrition mindset. No wonder people in droves are turning to alternative sources! An editorial in the April 1999 *Am J Clinical Nutrition* has Dr. Margo A. Denke commenting on results in the same issue from the National Cholesterol Education Program's Step I and Step II diets to lower cholesterol. She points out that from 10 to 25% of persons on such diets don't respond at all, while in 15 to 25% the same dietary program will produce a "reduction in LDL cholesterol equivalent to that of drug therapy." So, "despite its effectiveness, enthusiasm for dietary therapy has waned in favor of therapy with statins....Statin therapy is safe and has few side effects....drug therapy with statins appears safe and more efficacious than dietary therapy."

She's in favor of using both. Any measure to get that ol' cholesterol down -- we're saving lives here!

But the National Cholesterol Education program is faulty from the git-go. Except for urging more fruit and vegetable intake (a plus), they play the "low saturated fat, low cholesterol" anthem ad nauseum, *even though dietary cholesterol has almost nothing to do with blood cholesterol levels.*

They're staunch advocates of removing the most nourishing traditional foods, never associated with heart disease -- organ meats, eggs, butter, shellfish. Use of margarine instead of butter. Trans-fats from hydrogenated oil (no nasty saturated tropical fats allowed, even though they didn't cause heart trouble for thousands of years). Not too much meat, chicken, or fish because of fat and cholesterol in them. Very low fat everything.

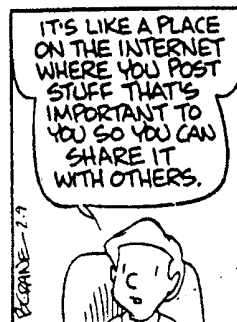
People on the great AHA lo-fat regimen are hungry, so they fill up to the max on carbs in the form of breads, sweet bakery goods, pastas, sugary cereals (mostly high-gluten).

### Only So-So Results

For many on the regimen LDL cholesterol went down, but often so did the "good" HDL kind, mainly in women. Also, triglycerides increased in a number of subjects. These blood fats can rise from high-carbs and sugar.

Thus, after long, hard work involving multiple interventions with about 9000 subjects to lower cholesterol via a low-fat, low-cholesterol diet, researchers admitted results were mixed, to put it gently. Oh, and subjects who got the best results tended to be those who exercised regularly.

Pickles/Brian Crane



Thus, Dr. Denke is saying with a sigh: well, I guess we'll do better with the statins--or maybe statins *and* diet *and* exercise.

## "Real" Science to the Rescue!

But technology already is making dietary cholesterol-lowering options easier, she writes consolingly. On the list of advances receiving her warm approval are "olestra-containing snacks" and "genetically engineered plants with superior nutritional profiles [that] are poised for introduction into our food supply."

With statin drug makers, the AHA, the media, and medical nutrition leaders like Denke leading the way, how can the great Anti-Cholesterol Crusade not triumph? I just don't want to march in their regiment.

Olestra is a nasty piece of 'food science' art -- an artificial nonfat designed to give people the satisfying illusion of fat. It's being used in lots of snack foods and chips. Olestra cost its producers a bundle and they're determined to push it, with the help of the anti-fat experts, despite the fact that it (1) flushes fat-soluble vitamins out of the body, and (2) tends to 'leak' from the rectum, causing embarrassment let alone ruined underwear!

Genetic engineering of foods is creating international furor. It's being conducted by scientists who must have been too weird as kids for anyone to play with and now get their jollies by improving on nature, without regard to consequences to the earth and all living creatures who are not androids like themselves. In a word, in the hands of bad science funded by remorseless multinationals, genetic engineering is evolving into a worldwide agricultural nightmare.

Note: Genetic engineering is totally different from the old, useful practice of cross-breeding of plants or animals. For a full understanding, don't miss the brilliant little book *Genetically Engineered Foods* (1998 Keats Publishing) by Robin Ticciati (who got his Ph.D. in math from Harvard and is completing a book on quantum field theory) and his wife Laura, founder of Mothers for Natural Law. Send \$6 to this nonprofit educational organization at P.O. Box 1177, Fairfield, Iowa 52556, for a copy plus list of some non-genetically engineered safe foods. □

## TWO LOGICAL THEORIES

Two newer theories on heart disease have already begun to take the wind out of the sails of High Cholesterol pundits.

(1) **Homocysteine**, normally a transient product of metabolism, can build up abnormally and damage blood vessel walls, leading to cholesterol deposits, etc. as part of the body's repair effort. **Extra folic acid, B6, and B12** actually prevent homocysteine buildup in persons prone to this problem, who may form a sizeable percentage of the population. No harm in reasonable extra supplements of these soluble B vitamins for any of us as well.

(2) **Inflammation theory**: Chronic inflammation in blood vessel walls, possibly caused by microbes such as chlamydia or *Helicobacter pylori*, or possibly by immune-system overreactivity to vessel wall injury (from vitamin C lack??), may be *the* major reason for hardening of arteries.

Antibiotic therapy is one suggested approach; but omega-3s may be pivotal in quieting and/or preventing inflammatory 'overkill'-- immune system defense reactions that continue long after any need.

The heart-protecting foods and supplements below should help in healing, *but also in keeping such inflammations from happening.*

### Cornerstones of Heart Health

\*That's a telling 'cornerstore.' The real ones lauded by alternative health leaders whose work I respect would include *all nutrients needed to keep heart and arteries fit and flexible.*

First, as close to a neoPaleolithic diet as feasible: lots of fish, shellfish, veggies, fruits, leafy greens, nuts, seeds, starchy roots and tubers, natural sweeteners, not too much reliance on gluten grains. Organically grown wherever possible. Free-range beef; lamb and pork raised largely outdoors on pasture and good feed; eggs and meat from free-range poultry; liver and other organ meats from free-range animals and fowl.

(You're free to trim away fat if you wish, *but forbidden to count cholesterol milligrams!*)

Egg yolks, by the way, are an unusually high source of two carotenoids that help to protect eyes against macular degeneration: lutein and zeaxanthin. Besides 300 milligrams of cholesterol which the baby chick would need for its development, yolk also has 1500 mg of phosphatidyl choline (lecithin) and 500 mg of phosphatidyl ethanolamine to make flexible cell membranes (the chick's or ours).

**Butter**; and/or sesame, olive, coconut, and palm oils for cooking and sauteing. Flaxseed oil plus olive or sesame oil for salads. Ground flaxseed for best source of lignan fiber.

Lots of C and E from food and supplements, in addition to a daily multivitamin/mineral containing all known essentials. All known and unknown antioxidants from plenty of plant foods, plus known ones from supplements, including selenium, beta carotene, various bioflavonoids. Fish oils when weather is cold, or joints achy, or fish intake low.

If you need extra heart nutrients, these have been found to be useful and safe: Coenzyme Q10, magnesium, carnitine, taurine, lecithin, hawthorn (an herb). Matthias Rath MD calls amino acids lysine and proline "nature's teflon agents." Together with vitamin C, he believes they can reverse deposits in arteries.

*L'chaim*-- Your long life and happiness! □



"I'm afraid you misunderstood. ... I said I'd like a mango."

## CARNITINE

I promised readers in *FL#100* to report on personal effects from l-carnitine. I've been taking 500 mg l-carnitine and 500 mg acetyl-l-carnitine every morning before breakfast for a number of months. Nothing spectacular -- they got me through the long winter without a serious cold despite a heavy workload, also my brain seems to be operating on more cylinders. Plus, now that I'm exercising again after a long layoff because of a twisted knee, I notice I'm not getting sore after my admittedly modest workouts (jogging on trampoline, swimming laps) but, shucks, I'm no spring chicken.

An older friend in his 80s stopped taking l-carnitine because he said he was getting a too-fast heartbeat.

One healthy young friend stopped because she didn't notice any effects at all, while another believes she's benefiting markedly in terms of physical and mental energy.

This story meant the most to me. A good friend in her late 50s has been suffering from environmental illness for at least a dozen years. She's worked her whole adult life for a railroad in the midwest, in an office adjoining its heavy machinery plant until a few years ago. She kept having bad bronchitis; later another manifestation was added: awful vomiting spells lasting for hours whenever she'd get a whiff of almost any chemical -- whether it was cleaning fluid, fumes in the RR plant, or a neighbor's charcoal fire-starter.

She couldn't travel by air any longer; her life was increasingly restricted. Unfortunately she had to keep working, although she moved to a different building. A very disciplined,

cheerful, hardworking lady, she'd often go to work after being up half the night vomiting. In my book, a less hypochondriacal person doesn't exist!

I'm sorry to say her lawsuit against the railroad was dismissed by a stonehearted judge who had never heard of, and didn't believe in, the existence of an immune-system breakdown called 'environmental illness.' But she helped future workers, because OSHA made the RR clean up its act!

Just for fun last Christmas I sent carnitine and a copy of Robert Crayhon's book, *The Carnitine Miracle*. (Although she probably takes a multi, she's never been big on supplements but I love her anyway!)

You could have knocked me over with a feather a few weeks ago. During one of our fortnightly phone calls, she mentioned casually she doesn't get the vomiting spells any more, and I asked, just as casually, if the doctor had given her a newer medication. "Oh, no," she said, "it's the carnitine. The intervals between gradually got longer and after about 6 weeks, the spells just stopped. I haven't had a one in months!"

Crayhon *did* say the stuff strengthened his patients' immune systems a lot. Thanks, dear alternative-health buddy -- I owe you!

A reader asked about the best food sources of carnitine. The only sizeable ones seem to be muscle meats, e.g., of sheep, lamb, beef, and pork. Fish has a little more than chicken, but each has far less carnitine than animal muscle. For example, 100 grams (about 3.5 oz) of beef steak contain over 500 micrograms; chicken and fish about 30 micrograms; milk and cheese about 20 micrograms. The closest to this in the plant kingdom appears to be 1.21 micrograms of carnitine in 100 grams of cooked asparagus! □



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

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