

the **FELIX** Letter

A COMMENTARY ON NUTRITION

Nos. 88 & 89

1996

HI-CARB, LO-FAT? NOT FOR ALL! A 3-BOOK REVIEW

I cherish a letter from Zee (Suzanne) Randegger who, with her husband Ed, publishes the superb quarterly *Environ: A Magazine for Ecologic Living & Health*,¹ and *The Wary Canary*,¹ a newsletter for individuals who have a "canary in the mine" vulnerability to environmental toxins.

Zee was a vegetarian for years, "until my overindulgence in home-ground, homemade breads, yogurt, and soy sent me out of my gourd," as well as keeping her blood pressure high. After being diagnosed as grain-intolerant not long ago, she cut way down on carbohydrates, except for "starchy veggies like sweet potatoes, carrots, winter squash, etc." Her new dietary program of low carbs, "garlic and cayenne, enough fats for satiety (olive, flax and canola oils), and a possibly higher than normal animal protein intake" has lowered her blood pressure, cleared her foggy brain, and kept her weight normal.

(Note: In FL#47 Dr. Lloyd Rosenfeld describes hypertension as one of many chronic pesky ailments in patients he later found to be gluten-sensitive. When he had them lay off their 'daily bread' etc., they finally got better. The excellent *Can a Gluten-Free Diet Help? How?* by Lloyd Rosenfeld, M.D., can be ordered from Keats Publishing, Box 876, New Canaan CT., 800/858-7014.)

Zee is concerned about a friend who, having gone vegetarian "with fierce religiosity" about seven years ago, now struggles with severe arthritis and "a stupendous weight gain." Her friend, like Zee when she was vegetarian, consumes bread, pasta, and other wheat products at almost every meal. Zee suspects her friend's arthritis and obesity stem from a toxic reaction to an overload of gluten in wheat--all too common and all too often under-diagnosed in North American medicine.

(The gluten that causes trouble--typically in people who don't know their favorite foods are their nemesis--is a complex mixture of proteins in, mainly, wheat, rye, and barley. Gluten exists in the seeds, i.e., the grain, so *sprouts* of wheat, rye, or barley, for example, are okay since they don't have gluten.)

Truth is, many folks, even those who aren't gluten-sensitive, don't do well on a steady, big intake of carbohydrates. Yet "high-carb, low-fat" is the mantra that doctors, nutritionists and journalists have been chanting for a decade or more.

Fats are *the* villains in heart disease, cancer, and obesity, so low fat is good, and no fat is even better, right?

Sorry, no cigar. We need decent amounts of good fats to fight all three scourges and a host of others. What we *surely don't* need is to drench our salads and sandwiches with great glops of mayonnaise, load up on crispy snacks fried in hydrogenated trans fats, or squirt gobs of sour or whipped cream on anything that holds still---but we know that.

The fats we *do* need existed for thousands of years in foods that were meant to be eaten by us and other living creatures. I mean aquatic stuff---*finfish, shellfish, crustaceans*, all sources of the great Omega-3 fats EPA and DHA. *Edible grains, seeds and nuts*---for valuable Omega-3 (w3) and Omega-6 (w6) essential, vitaminlike fats. *Coconut meat and oil*---for easily digestible, virus-fighting medium chain saturated fats. There are good fats, i.e., w3 and w6, in *poultry, game, lamb, and organ meats*; and in *eggs* from free-range chickens given flaxmeal or fishmeal supplements.

All told, the hi-carb/lo-fat track leads to *too few of the life-giving, disease-quelling, obesity-fighting 'essential' fats*. Other problems, too. Read on.

YOUR BODY KNOWS BEST

Like Zee Randegger, Ann Louise Gittleman, M.S., knows all about principled vegetarianism and the inevitable



"THERE GOES CIARA, AGAIN. ALWAYS TESTING SOME NEW VITAMIN."

¹Subscription information: Wary Canary Press, P.O.B. 2204, Fort Collins, Colorado 80525. Tel: 970/493-8089.

hi-carb path to which it led her. "I considered myself very socially aware with a strong spiritual consciousness and I believed it was very bad to eat meat and other animal products. I felt that fruits, vegetables, seeds, and nuts were man's natural foods and meat was not," she writes in her 1996 book *Your Body Knows Best* (Pocket Books, 1230 Ave. of the Americas, NY, NY 10020).

She explains why it almost did her in when she was a college student in the early '70s--she became a nervous wreck, her hair fell out, and she began wasting away. *She had the wrong blood type for vegetarianism.* Before reading her book I hadn't a clue that our blood type is an important determiner of the foods and physical activities that work best for us. An amazing concept, really--very new here but apparently big in Japan, where "the study of blood type and its impact on personality is serious business," used by companies such as Honda and Toyota when researching consumer preference, etc.

Her book introduced me to the work of two American naturopathic physicians, James D'Adamo and his son Peter D'Adamo, who have researched the blood groups (O, A, B, and AB) in relation to biochemistry, diet, and disease. Jonathan V. Wright, M.D., in his column² in the June 1995 *Let's Live*, writes: "...many people are not aware that if they have type A blood cells, they also have type A skin cells, intestinal cells and lung cells. In fact, all of their body cells are type A." (And so on with each blood type.)



² Dr. Wright goes on to point out that scientists have identified hundreds of additional cell-type "markers" that are unique to each individual. They fall into a biochemical category called "*lectins*" that exist not just on the surface of every cell in humans, but on cell surfaces of plants and animals, too! He refers to Peter D'Adamo's work in this area, and to a unique lab test Dr. D'Adamo developed to learn which food lectins are compatible with an individual's lectins. The test is available through Meridian Valley Clinical Laboratories, 515 West Harrison, Kent, WA 98032. Tel: 206/859-8700. Clearly, this is an area to explore for future newsletters!

Your Blood Type & Evolution

The reason the different blood types affect our responses to foods, Gittleman explains, is that they developed in sequence during very different evolutionary conditions. Type O is the oldest, going far back in prehuman times. (Gorillas, for example, are type O, too). Flesh foods, including aquatic ones, were basic to the diet, along with roots, tubers, leaves, berries, fruit, nuts, and seeds. Dairy and cultivated grains were unknown; *modern type O's tend to do poorly on both, especially the high-gluten grains in our commonly available carbs.* They also require vigorous exercise to stay healthy and happy! (That's me to a T.)

Type A came many millennia later, adapting to a dwindling meat supply. Gittleman says that, in general, A's are the only blood type that may be suited "to a vegetarian or near-vegetarian diet. Many of my clients who are blood type A prefer a vegetarian diet, although I warn them that such a diet often leads to an overdependence on grains, which can exaggerate a problem of gluten intolerance."

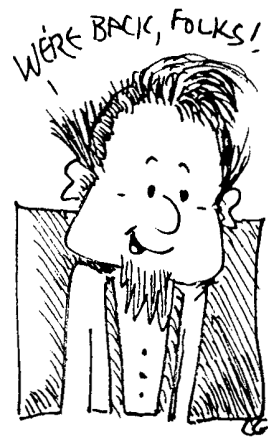
Types O and A are found in about 85% of the American population, regardless of race.

Blood type B appeared less than 10,000 years ago, "which was after the introduction of domestic grains into the human diet," i.e., after we began domesticating animals, planting and harvesting, instead of depending on increasingly meagre yields from hunting and gathering. Gittleman says type B folks can handle animal products better than type A, and usually are well adapted to dairy, especially fermented products like yogurt. Ten percent of whites and 20% of blacks in America have type B blood.

Blood type AB, the rarest, was the latest to appear in human history. People with type AB are "perhaps the most well-adjusted for the new foods in our diet, such as dairy products and domesticated meats and grains." It occurs in only 4% of blacks and whites in America.



Could I be type A?

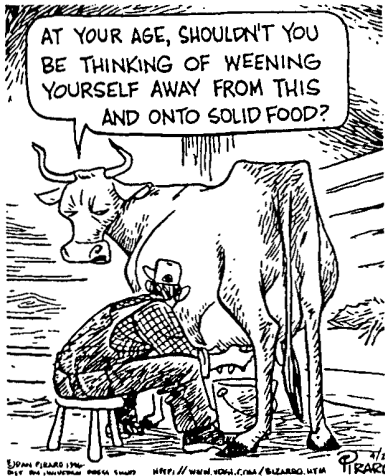


The book's descriptions of ideal food choices, physical activity, etc. for each blood type are eye-openers. It offers a fresh approach to many human puzzles, clarifying why few of us are designed, evolutionwise, to deal with a steady glut of dairy and processed carbs. Despite many success stories about vegetarianism, it, too, works only for certain, usually Type A, people--very seldom for O or B blood types. We know from newer evidence that some of the great apes periodically go in for avid killing and eating of small monkeys. Gittleman says paleontologists tell us flesh-eating is natural to us because it goes back to our beginnings--something she refused to believe 20 years ago.

Gittleman knows of vegetarianism's pitfalls because of her extensive clinical work, and her own dismal early experience from which it took her three years to recover. She's concerned because it's tough to get enough amino acids from vegetarian proteins. She, too, has seen the hi-carb/lo-fat/lo pro trend make people fatter than ever. For one thing, it can cause weight gain from water retention. Without adequate proteins in the blood to maintain fluid balance in tissues, water leaks out from cell membranes into spaces between cells where it doesn't belong, creating pressure, discomfort--and bloat.

Also, one of protein's most specific functions "is to stimulate the production of the hormone *glucagon*. Glucagon's job...is to open up the cells of stored fat already in the body for use as a fuel source. What this means is that eating protein in the form of poultry, fish, and red meat actually helps us lose weight by allowing our bodies to burn off its stored fat."

She writes in her thoughtful chapter on vegetarianism: "As conscientious citizens of the world community, many of us have struggled with the spiritual ramifications of eating meat for many years. It has been a long and difficult path, trying to understand the difference between spiritual beliefs and the biological needs of the human body."



Insulin Resistance: New Roadblock to Health

After we digest carbo's, the glucose that's derived from starch or combinations of glucose, sucrose, fructose, etc., enters the bloodstream. The rise in glucose (blood sugar) stimulates the pancreas to send insulin into the blood circulation. This major hormone makes it possible for liver, muscle, and adipose tissue to take up, use, and/or store blood glucose. (The only organ that can receive glucose without insulin's okay is the *brain*, which uses glucose 24 hours a day.) Insulin also encourages tissues to take up amino acids from digested protein.

That's the normal course of events. In many folks, however, the pancreas keeps making more insulin than is good for them. It does this *to overcome their inadequate response to insulin--i.e., their tissues balk at taking in glucose, etc.* This keeps blood sugar high, so their pancreas gets signals to send out more insulin. "*Insulin resistance*" is getting a big play in medical literature, because it's on the rise and it leads to *chronic elevated circulating insulin--a recipe for trouble.*

Mainly, insulin resistance and its offshoot, high blood insulin (hyperinsulinemia), are predictors for heart disease. They're also associated with abnormally high fats in the blood, high blood pressure, non-insulin-dependent diabetes, and *obesity.*

A bunch of factors, including heredity, promote insulin resistance. Diets very high in fats may produce it. In other susceptible people, a steady high intake of 'naked' carbo's starts the cycle. Hi carbo's can cause a big rise in blood *fats*, which in itself can bring on insulin resistance. But the factor that wins hands down is *obesity.* Fat folks are major candidates for insulin resistance. When they lose the excess fat, their tissues swiftly become more responsive to insulin.

But the body can play dirty pool. Once the merry-go-round begins of obesity, insulin resistance, and hyperinsulinemia, it can lead to more fatness, *because high insulin levels signal the body not to release fat from adipose storage depots. It takes glycogen to reverse that signal, but the high blood sugar inhibits glycogen release.*

Talk about your vicious circle! It helps us to understand the rise of what many scientists call "no-fault fat."

Insulin, it turns out, is primarily an *anti-starvation hormone.* It evolved millions of years ago, allowing many species, including our gatherer-hunter predecessors, to survive lean times and famines. Muscles and liver can only store limited amounts of glucose (as glycogen) and extra amino acids from protein foods, *so the liver converts surplus glucose and amino acids into fat, whisking it off to adipose tissues.* (Remember, from high school chemistry, how fat doesn't become sugar, but sugar can turn into fat?) Adipose tissue, of course, has infinite fat-storage capacity--in case you hadn't noticed.

So, if you're a fatty, you've got a better than average chance of making it thru a famine. But what's the real situation in the U.S? Naked-carbo glut, trans-fat glut, and more fatties than ever before. The increase we're seeing in true poverty in the U.S. isn't causing famine but makes it harder for families to afford stuff they need. Instead, they're filling up on cheap carbo's and grease: white bread, pasta, chips, soda pop, hi-fat beef. Have you noticed how many more, not merely chubby, but obese adults and kids you're seeing compared to, say, 20 years ago? Medical statistics confirm a steep rise. The poorer the neighborhood, the more fatties. (At country clubs, by contrast, one can never be too rich or too thin.)



THE ZONE: A DIETARY ROAD MAP

Barry Sears, Ph.D., in *THE ZONE* (1995, Harper Collins, New York 10022), says he can help people break the insulin resistance/fatness cycle once and for all. Primarily, it's not about becoming thin but getting and staying healthy. *Food is the magic key to "The Zone,"* Sears' term for a steady state of physically and mentally energized well-being.

While about a quarter of the U.S. population may do okay on the touted hi-carb/lo-fat regimen, he says it's the wrong way for most of us to get to the Zone:

(a) The 25% of us who can eat abundant carbo's without triggering high insulin, getting fat, or feeling hungry all the time "just had a lucky draw in the genetic lottery," he writes.

(b) 25% of us get fat just breathing deeply near a carbo--again, it's genetics. We're the ones whose insulin rises and stays high, whose carbo's turn instantly into storage fat that won't budge. We may also be the most vulnerable to heart disease and adult diabetes.

(c) 50% of us do all right on *moderate* carbo intake, so long as enough protein and good fats come with it, *and only if the carbo's aren't naked flours and sugars.* But on the fashionable hi-carb/lo protein/lo-fat diet, we also end up with high insulin levels, the munchies, and an urge to throw the bathroom scale out the window.

That means about 75% of us are in trouble on the lo-fat/hi-carb diet. In *The Zone* Sears lays out a course based on keeping insulin and blood sugar at optimal levels. He makes a major point that's not yet been grasped by most nutrition experts: *the passport to the "Zone" is the food we eat because food is the best way to control the most powerful hormones there are--the eicosanoids.* He says the right eicosanoid balance gets us in the Zone and keeps us there.

First, Some Biochemistry

Don't go away, I'll make it easy! *Eicosanoids* is the catchall term for 20-carbon activated molecules that our bodies make *only* from metabolites of w3 and w6 fats. Prostaglandins are eicosanoids, but so are thromboxanes, prostacyclins, leukotrienes, etc. (To simplify in the newsletters I've been calling them all prostaglandins, but eicosanoid is correct--*eicosa* means 20 in Greek.)

Although the primary w3 and w6 fatty acids were identified as essential, i.e., vitaminlike, in animal studies in the 1930s, research in this area lagged far behind advanced work in vitamins and the other essential nutrients. Until a few decades ago the instruments didn't exist to measure the complex metabolites of the two families of fats in small tissue samples. Also, scientists weren't entirely convinced these fats were all that vital to humans in whom it was hard to recognize deficiencies without the right technology. Their true significance still eluded most scientists even after they learned the absurdly powerful, fleeting prostaglandins came only from essential fats.

When state-of-the art fatty acid studies finally became possible, medical work focused only on the w6. The rationale may have been the w3 produced less striking benefits than w6 in animal experiments, so maybe w3s weren't really essential for people. As I wrote some years ago, the choice to ignore the w3 was about as smart as trying to study walking by focusing on the action of one leg. Inevitably, the research produced more questions than answers.

Then, almost overnight in the early 1980s, w3s in the fish oils eaten by Eskimos became stars of a stunning anti-heart disease drama. Reluctantly, the medical community began to accept the reality of two families of essential fats, both of which made eicosanoids. But they still didn't see the whole picture. Still don't, Sears says.

A Flashback

Longtime subscribers may recall I first began reporting in 1983 (in FL#14) on earlier work of molecular biologist Donald O. Rudin, M.D. The breathtaking scope and logic of his concepts blew me away! Rudin insisted essential fats and eicosanoids of both w3 and w6 families formed an **unrecognized** major hormonal regulatory system of the body. Unlike protein-based "long-distance" hormones like insulin that circulate in the blood, these were activated fatty acids, i.e., eicosanoids, that worked *locally* in each cell where they were made. But they were so powerful they regulated every known bodily function, even those of the brain. They even made sure the regular hormones worked at the cellular level, where it counted.

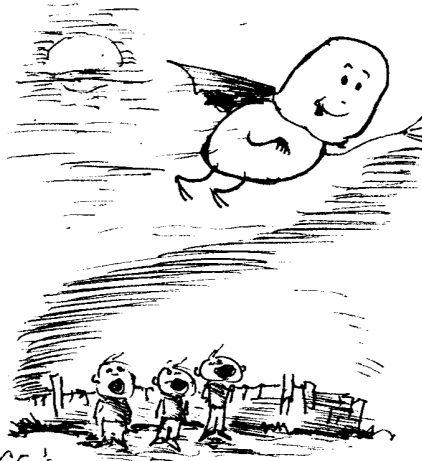
The w3s also kept w6 eicosanoids from running amok, he said. The "bad" w6 eicosanoids caused heart-threatening clots, inflammatory joint pains, squeezing down of bronchial tubes in asthma attacks, etc.--- unless the diet provided enough w3s to keep them in check.

The puzzling rise in "modern" illnesses--coronary heart disease, diabetes, cancer, and mental disorders--has its roots in 20th century dietary distortions, Rudin said. These bring on everyday shortages of protective nutrients, while propelling us into overconsumption of "antinutrients" such as sugar and hydrogenated and trans fats. Many reform nutritionists had sounded the alarm about losses of fiber, minerals, B-vitamins, vitamin E, etc. However, the stark decline in w3 consumption--down more than 80% from traditional intake--had gone unrecognized.

*This loss, Rudin said, leads inevitably to chronic dysregulation in the eicosanoid-based cellular hormonal system. It means no checks and balances against inflammation- and disease-producing w6 eicosanoids.*³

When I read, with considerable awe, Dr. Rudin's unpublished biomedical/nutrition textbook in 1983, I knew people at last would have a handle on the control and prevention of major disorders. It had been there all the time, in our daily fare! *Nutrition*--not drugs and surgery--should be the first line of defense.

Rudin had proven it with simple administration of the missing w3 fats to 44 volunteer patients in his two-year pilot study. *Nutrition* should be our primary pharmacology, he insisted, for the essential fats we eat determine how smoothly and soundly our body machinery runs. We wrote a popularized version of his textbook, *The Omega-3 Phenomenon*, published by Rawson in 1987. Recently we updated and revised it for a new publisher, Avery, to stay current with the explosion of research in the field. Entitled *Omega-3 Oils*, it should be available from the publisher in September, 800/548-5757, and from bookstores by November.



"LOOK! UP IN THE SKY!
IT'S A BIRD! IT'S A PLANE!
IT'S VITA-MAN!"

'Blocking' Your Way to The Zone

It's gratifying to have Dr. Sears convey this fundamentally optimistic message in his own unique way in *The Zone*, basing it on laboratory work and his own pilot studies.

According to him, a "Zone-favorable" diet will have 30% calories from fat, 30% from protein, and 40% from carbohydrates. (Contrast this with the 'heart-healthy' diet ratio of 15% -15% -70%.) Sears discards calorie counting in favor of the 'block' method. At each meal, designated 'blocks' of food provide the "Zone-favorable" ratio of protein, fat, and carbo.

Say your daily protein requirement is about 70 grams. Since each "block" of designated protein-rich food will have about 7 grams of protein, you'll need 10 "protein blocks" a day. You then divide the 10 blocks among 3 regular meals and 2 snacks.

Here's an example (P = Protein Block):
Breakfast - 2 P; Lunch - 3 P; Late afternoon snack - 1 P; Dinner - 3 P; Late night snack - 1 P

The snacks are important, Sears says, because we're never to go more than five hours (except during sleep) without eating "Zone-favorable" fare.

Here are some foods supplying roughly 7 grams of protein. **Each represents one protein block:**

- 1 ounce lean meat or poultry (a 3P meal could have 3 oz.)
- 1-1/2 ounces of most fish (a 3P meal could have 4-1/2 oz.)
- 3 oz tofu
- 2 oz low-fat cottage cheese
- 1 oz spirulina (blue-green algae) powder

The next two steps follow from the first. At each meal and snack you add the same numbers of **fat** [F] and **carbohydrate** [C] blocks as protein blocks. Breakfast then would have **2P 2F 2C**, lunch would have **3P 3F 3C**, and so on, on the above 70 gram protein diet.

Here are some **one-block fat** foods (each has about 1-1/2 grams of fat):
3 olives, 1/2 teaspoon mayonnaise, 1/2 teaspoon peanut butter, 1/3 teaspoon oil.

³ The July 3rd *S.F. Chronicle* reported an astonishing 74% increase in new asthma cases in the U.S. since 1984, together with a 59% increase in deaths, mostly in children. The article cites major research efforts to come up with drugs to quell the "overactive" inflammatory immune response in asthmatics. But it also said "Australian research suggests that diets containing omega-3 fatty acids, such as those found in fish oil, protect against asthma. Nations that consume lots of fish have lower asthma rates."

Carbo blocks are more complicated. Basically, the author nudges us into big intakes of low-starch vegetables, a goodly amount of fruit, and a minimum of bread and pasta. Here's a sample of **one-block carbohydrate** foods (containing approx. 9 grams of carbs): 1 cup broccoli; 1 cup green beans; 1/4 cup lentils, kidney beans, or chick peas; 1 large tomato; 2 cups raw shredded cabbage; 4 cups raw spinach--Mind you, this last is only **one** carbo block!

Some Zone-favorable one-block fruits:

1/2 apple or orange, 1 peach, 1 cup strawberries, 1/4 cantaloupe

Here are a few **one-block carbos** from his cautionary list of "**Unfavorables**"--those that tend to provoke higher insulin levels--but are okay when balanced with fat and protein blocks and, ideally, more veggie carbs.

- 1/4 cup cooked pasta
- 1/2 slice bread
- 1/4 bagel
- 1/2 oz. dry breakfast cereal
- 1 corn tortilla

Several readers have told me the 'block' concept of meal planning takes a lot of figuring and planning, but becomes more routine with practice. The book has all manner of how-to's, including hints for eyeballing food blocks, ways to stay on the Zone diet when you eat out, and recipes that combine the right 'block' ratios.

The diet's cardinal rule--and according to Sears the key to controlling insulin and blood sugar--is this: **"Every time you eat, make sure you maintain a 1:1 ratio of protein to carbohydrate blocks."** This is the surest way to steer Zoners away from mindless munching on bagels, chips, cookies, etc., because each bite will have to be matched with comparable blocks of protein, and they know that's going to turn their little 'snack' into a banquet!

Sears lives enough in the real world to give Zoners a break when fast food is the only food in view, or powerful urges overcome sensibility. One beef burger or a turkey on rye with a teaspoon of mayonnaise qualifies (loosely) as a 3P-3C-3F meal. Zoners can even have a Snickers bar or rich dessert once in a while, as long as they eat it with, say, 3 oz. turkey or 2/3 cup lo-fat cottage cheese.



The Zone in Real Life

Here are experiences of two 'baby boomer' friends of mine. Alex always had a weight problem. The last time he dieted "successfully" he got frail, having lost too much muscle tissue with the rapid weight loss. After a while, he gained the fat back, in spades. He thinks the Zone diet may be working for him, in that he now has pretty well mastered the routine for the carbo, fat, and protein blocks, he's not uncomfortably hungry, and he's losing weight albeit slowly. Sears says it is impossible to lose more than 1 to 1-1/2 lbs of *body fat* a week. "You can lose more weight, but that will be primarily water loss and muscle-mass loss," he writes.

When Alex skips the Zone blocks for a few meals or for a week, he says it's no tragedy, he just starts again. He tells me, "This is supposed to be a lifetime program to stay healthy, so it's got to be flexible. So far [several months], it's do-able."

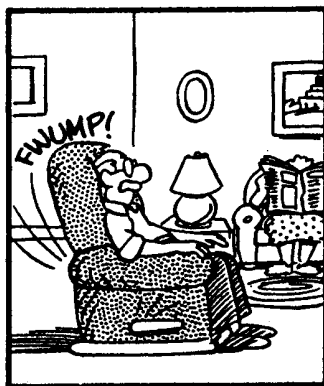
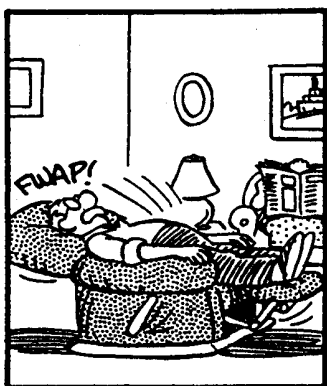
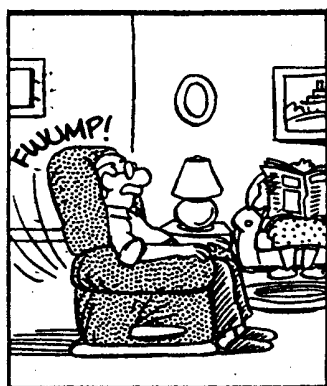
Alex isn't aware of any exultant well-being or whatever the Zone is supposed to make him feel, but he guesses it's because he's not following the diet strictly. At least it's creating more disciplined patterns, mostly freeing him from the compulsion to overeat. "When you've as much fat to lose as I do, I'm reconciled to being a little hungry and a little bored. It looks like it may work for me in the long run, not like my other near-starvation diets."

Ann, an active, slender woman, had little difficulty following the program and felt good on it. After some months, however, she became drawn and fatigued, apparently from losing too much of her body fat. At that point, she began to listen to her deep cravings for 'unfavorable' carbos, gained back needed fat, and now follows a much looser version of the Zone diet. Sears recommends upping mono-unsaturated fat intake in this situation, not carbos. But Ann may be one of the lucky folks genetically who can handle larger carbo intake without getting high insulin levels.

Sears may be carrying fear of carbos too far, especially when he states that *"Eating fat does not make you fat."* It's your body's response to excess carbohydrates in your diet that makes you fat..." (p. 11) Dietary fat beyond energy etc. needs certainly *does* get tucked away in those handy adipose depots. He contradicts himself because the Zone diet, as he states, is very low in fat.

So, Warning No. 1: Sears is shooting for low-calorie intake and low body fat for all adults. That doesn't work for many; it's not a good idea during pregnancy; nor is it for women after menopause who are better off being a little *zofitg*, because adipose tissue makes estrogen for them. Except for NFL linebacker types, he says no one should take in more than 1700 calories--500 per meal and 100 per snack. His reasoning: on the Zone diet you access fat stores more efficiently, so "your calorie intake will usually decrease by 50 percent."

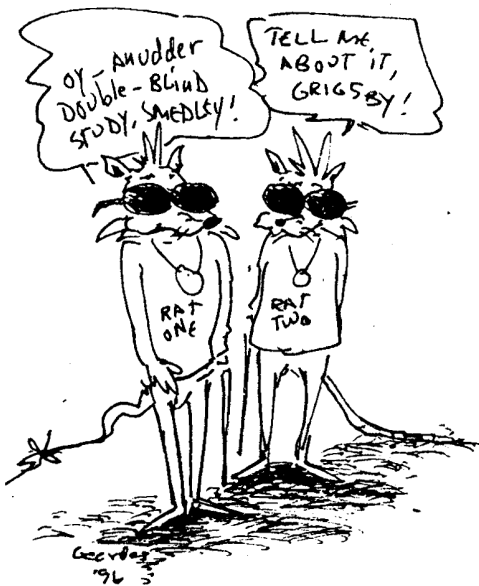
Pickles/Brian Crane



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BRIAN CRANE 7-15

If you have a lot of fat to lose, like Alex, the Zone *concepts* create a comparatively painless path to follow for the long haul. But a 50% decrease of the RDA of 2900 calories for the average man and 2200 for the average woman brings it down to 1450 and 1100 calories respectively. *That's too drastic for a longterm regimen.*

Yet Sears goes even further. He believes his program is ideal for *life extension*. This is the very low-calorie adequate-nutrient path that's popular with certain researchers, if not with their experimental mice. "For the average person, that will be 800 to 1,200 calories a day," he writes. "This may seem like a starvation diet, but I guarantee you that you'll have trouble eating all the food necessary to get to those calorie levels if you follow the rules for a Zone-favorable diet." (p.201)



Sorry, Dr. Sears, you've lost me there. Food isn't just a way to control eicosanoids--food is fun! 800 calories isn't fun. Is Sears shooting for a "Zone" akin to the exalted state of fasting mystics, who've consumed most of their own vitals and are close to knocking at Heaven's door?

Me thinks Sears has a touch of fanaticism in him. It may be related to his family history: his grandfather, father, and three uncles died of heart attacks before their middle 50s. In 1984 in his middle 30s Sears was hospitalized for serious heartbeat irregularities. The book grew out of his awareness that to have a healthy heart you need a balance between good and bad eicosanoids--and with his heredity, he'd better find the right balance *fast*. Before he solidified the book's concepts he had marketed his own GLA/EPA supplement. This was during his "magic bullet" period, a time when he was confident the right

biochemical mix, by transporting himself and everyone smack in the Zone, would solve heart disease and other ills. But outcomes were disappointing; he finally realized the only sure way was the slow way, through the foods we eat every day.

Why? Because our choice of foods and their fat content controls the kinds of eicosanoids we'll make. 'Good' eicosanoids moderate insulin levels, he writes; in turn, the right output of insulin and its opposing hormone, glucagon, helps to steer eicosanoid output towards the 'good' side. *Good eicosanoids = benign hormonal regulation of bodily functions = health.*

A Path to Eicosanoid Balance

DGLA is a key metabolite of the essential w6, linoleic acid, that can go two ways: (1) DGLA can be activated by our enzymes to form a benign group of prostaglandins, the PGE₁; or (2) DGLA can be transformed into arachidonic acid (ARA). ARA can then be made into a mix of good and bad eicosanoids--but mostly bad, in the sense that when overproduced beyond the body's basic needs they are catalysts for trouble.

Sears is convinced the secret of eicosanoid-mediated health lies with the ratio of DGLA to ARA, i.e., the more DGLA in our tissues and the less ARA, the better our eicosanoid balance will be. Viral disease, trans fatty acids and too many carbos in the diet, high adrenaline and cortisol levels from chronic stress--all are obstacles in the enzymatic steps to make DGLA.

But here our paths diverge!

Sears lists another "insidious" obstacle to output of DGLA and good eicosanoids: consuming "large amounts of alpha linolenic acid (ALA). This is an omega 3 fatty acid that's found in high amounts in flax seeds, flax seed oil, and walnuts."



The primary *essential* w3 is ALA. Western diets are ominously *low* in it. Donald O. Rudin, M.D., administering flaxseed oil to 44 subjects during his 2-year pilot study in the early 1980s, saw remarkable healing effects over a wide range of unyielding physical and mental disorders. J.F.J. Cade, writing on the "Aetiology of Schizophrenia" in the 1956 *Medical Journal of Australia*, showed that schizophrenia was much rarer in farming counties where *walnuts* were commonly consumed.

So here's Warning No. 2: Keep on using flaxseed oil in salad dressings and in medium-temperature cooking or baking--not frying. Ann Louise Gittleman has a splendid chapter on fats in which she suggests as a general rule of thumb at least a tablespoon of flaxseed oil a day. She says it's "absolutely delicious drizzled on air-popped popcorn and brown rice."

Although the laxative effect of flax *seeds* (or flaxmeal) calls for moderation in their use, their many benefits include a special fiber, lignan, which is changed by bacteria in our intestine to compounds that are protective against cancer, especially colon and breast.

And continue to enjoy walnuts for eating and baking, considering them one of nature's perfect gifts!

Flaxseed oil was a major food oil in Europe and Russia for centuries until World War II, as it took little technology to press out the oil. China has used it as a food oil for possibly 5000 years. Northern and northwestern China today are the nation's biggest flax producers and flaxseed oil consumers. Germany imports over 66,000 tons flaxseed a year for use in baked goods.

Relax, Barry!

A review of studies in humans shows that, in fact, consumption of alpha-linolenic acid (usually from soy, flax, or perilla oil) tends to slightly *diminish* arachidonic acid in tissue lipids. Some of the ALA consumed is oxidized for heating the body, while a portion is recycled into needed lipids and cholesterol, especially in the developing brain of newborns.

The accumulating research suggests other functions for ALA, but the most explored one to date is ALA's conversion by the body's enzymes to *EPA* and *DHA*. It so happens that EPA and arachidonic are catalyzed by the same enzyme, "delta-5 desaturase." Moreover, w3s have dibs on all transforming enzymes--they compete more successfully than the w6 for them. The result, as the above studies show, is a reduction in arachidonic formation from DGLA--just what Sears wants.

Another moreover: EPA competes more successfully than arachidonic for an enzyme that transforms both into eicosanoids. That means arachidonic will make fewer potentially bad eicosanoids, while EPA will make benign or neutral ones.

Let's remember that making eicosanoids is only *one* of the functions of essential fats. Metabolites of both w3 and w6 are the major components of *all* of our cell membranes. They have everything to do with controlling what comes in and goes out of every cell in the body. They're needed to transport cholesterol through the bloodstream. They waterproof our skin. DHA is needed in large amounts in the retina of the eye and in the testes. And w3 DHA plus w6 ARA make up the major polyunsaturated fats of the brain.

Vegetarians Need More ALA!

Sears wisely stresses the importance of getting enough EPA, from plenty of fish in the diet, to put a brake on arachidonic's potential for making trouble. But the only EPA (and DHA) that vegetarians and others who don't eat seafood or other animal sources will get is *what their bodies make from alpha-linolenic acid*. Remember how important DHA is in the eyes, brain, and male testes! Seeds and oil from flax are ancient, time-honored sources, and he's not doing a service by raising his false alarm.

Yes, huge doses of flaxseed oil may have pharmaceutical effects. So can very large fish oil doses. Such doses should be used only with medical advice. Too much w6 linoleic acid has already shown itself to be a cancer promoter, as well as a suppressor of w3 effectiveness. *Let's remember, the essential w3 and w6 fats and their metabolites produce hormonelike actions throughout our system. Moderation is the key, as it is for the regular intake of any powerful essential nutrient.*

Aside from my stated objections, I agree that the Zone regimen *is* a good one for heart disease. It also should work for arthritis, adult-onset diabetes, and for many auto-immune disorders--so long as it provides enough calories and alpha-linolenic acid. Our species has had only a few thousand years to accommodate to dairy and a grain-based diet, and just 50 years or so to deal with the mountains of commercial refined stuff that can send blood sugar soaring. Except for a few embellishments, *The Zone* promotes gatherer-hunter fare, easy on the system and not too different probably from that of our ancestors a hundred thousand years ago.

In 1983 when I first encountered Dr. Rudin's provocative theories on the powerful regulatory effects of the two families of essential fats, I felt as if I had been given the keys to the kingdom. I finally understood what my years of study in nutrition were leading to. He was the first scientist to point out that the abrupt loss of w3 in modern western diets led to disruption of a major *essential fatty acid-based* hormonal governing system that, in turn, led to multiform diseases. But these disorders were given separate names and treated by different specialists, none of whom recognized them as variants propelled by the same nutrient disruptions!

Two Prophecies

The medical world has made some progress since then, but it's awfully slow, by my lights. I'm glad Barry Sears is spelling out for doctors et al. why the eicosanoids we make from w3 and w6 fats have so much to do with health. In 1983 I wrote: "[Dr. Rudin's] work may yet prove to be the definitive one that nudges 21st century medicine into acceptance of nutritional therapy as a 'primary pharmacology.' (Meanwhile, the medical patrimony is favoring it with the kind of baleful stares reserved for someone in the next pew who's singing the wrong hymn!)"

Barry Sears writes in the last chapter: "An understanding of how eicosanoids are controlled by diet will be the foundation of the next frontier in twenty-first-century medicine. Eventually, as more and more physicians learn this basic concept..., I believe that the hormonal benefits gained from a Zone-favorable diet will be considered the primary treatment for all chronic disease states, with drugs being used as secondary backup."

Amen to that! □



NOURISHING TRADITIONS

The cover of what has become my all-time favorite cookbook says it "challenges politically correct nutrition and the Diet Dictocrats." *Nourishing Traditions* by Sally Fallon, with Marion Pat Connolly and Mary G. Enig, Ph.D. (1995, ProMotion Publishing, San Diego CA 92122) is a work of genius that could have been accomplished only by this devoted trio of *mayvans* and scientists. It is so richly encyclopaedic that I can only do it justice piecemeal; I expect I'll be excerpting gems from it for most of the next 150 issues of *The Felix Letter*. At the beginning of each chapter and alongside each recipe page of this 600-page indexed volume, are brilliant bits of lost, hidden, or squelched nutritional lore, some of which may save your life. Some samples:

- The advice of the Diet Dictocrats--the dominant, all-powerful medical, governmental, and research organizations that dictate national health policy--is as often harmful as it is wise, influenced as it is by the food processing industry--the largest and most powerful manufacturing industry in the country. For instance, the nutritional guidelines in the form of a pyramid "rightly give fruits and vegetables their due. ...But several dangerous errors are built into the edifice of the Food Pyramid. First, the new guidelines imply that everyone can eat the same foods in the same proportions and be healthy. According to Dept. of Agriculture recommendations, grains should be the basis of our diet; but many people do very poorly on grains. Others cannot tolerate dairy products. ...[T]he pyramid calls for reduced fats without addressing the dangers of low-fat diets..."

- "Isolated protein powders made from soy, whey, casein, and egg whites are currently popular as basic ingredients in diet beverages and many so-called health food products. These proteins are obtained by a high temperature process that over-denatures the proteins to such an extent that they become virtually useless, while increasing nitrates and other carcinogens... Soy protein isolates are high in mineral-blocking phytates and potent cancer-causing and growth-inhibiting enzyme blockers."

- "Allergy tests have revealed sensitivities to every food commonly eaten but most prevalent are allergies to milk products and grains--precisely the two foods added to man's diet when he changed from a hunter-gatherer life-style to one of cultivation and domestication. The proteins of grain and milk, namely gluten and casein, are two of the hardest proteins to digest. This is one reason that traditional cultures almost invariably soak or sprout grains and culture their dairy products before eating them."

FOR BETTER OR FOR WORSE Lynn Johnston

AHA! SO THOSE ARE YOUR NEW GLASSES. TURN TO THE SIDE AND LET ME SEE!



I THINK THEY SUIT YOU, EL. I THINK THEY'RE VERY ATTRACTIVE!

I DON'T KNOW, MOIRA...



EVERY TIME I LOOK IN THE MIRROR, THE PERSON LOOKING BACK ISN'T ME!



... IT'S MY MOTHER!



• "The experts assure us that the theory that animal fat consumption causes coronary heart disease is backed by abundant evidence. Most people would be surprised to learn that there is, in fact, very little evidence to support the contention that a diet low in cholesterol and saturated fat actually reduces death from heart disease or in any way increases one's life-span."

• "...Orientals tolerate grains better than other population groups, perhaps because of the length of time Oriental societies have subsisted on grains. Those...unable to thrive on grains have long since been selected through shortened life-span and reduced fertility. *This selection process may be the reason that Orientals have longer intestines than other races; and the pancreas and salivary glands of Orientals are up to 50% larger as a function of body weight than those of Westerners. These traits allow them to digest grains more fully and contribute to their high tolerance for rice, millet, and wheat.*" [emphasis mine. CF]

• Butter and coconut oil contain a large portion of short chain and medium chain fatty acids that are absorbed directly through the portal vein to the liver, where they can readily be called on to supply quick energy. They tend to contribute to weight gain much less than commercial vegetable oils, which are not metabolized as rapidly for energy. "The short and medium chain fatty acids also have anti-microbial and anti-fungal properties in the intestinal tract; they have anti-tumor properties and help strengthen the immune system, while an excess of polyunsaturated fatty acids stimulates tumor growth."

Run, don't walk, to the nearest phone and order *Nourishing Traditions*: \$22.95 U.S. plus shipping from the publisher, 800/231-1776, or from Price-Pottenger Nutrition Foundation of which Marion Connolly is executive director and curator, 619/574-PPNF. □

LIGHTING UP MY LIFE

Some of my readers may have noticed a slight gap since *FL87* arrived in (gulp) February. Not only did I *not* succumb to an overdose of supplements as my enemies (both of them) suggested, I gained *two bionic eyes*. Cataract surgery with lens implant, four months apart, in each eye and I take back all the rotten things I've said about doctors. Ophthalmologists are my heroes now. All they do is try to fix up the damage done by Life, Lousy Diet, Other Doctors, Too Much Sunshine in Eyes, etc. In my case, it was the latter because I lived most of my life in sunny southern California and never wore sunglasses or hats with brims. (Word to the wise: antioxidants inside the body and protection from UV light on the outside will slow down clouding of the eye lens. I'm lucky I could wait, because until ten years or so ago, implant lenses had not yet been perfected and thick glasses were needed.)

Not only can I read the phone book without glasses for the first time in 30 years, I can, alas, see the wrinkles and imperfections in, to quote the immortal Erma Bombeck, "my fallen soufflé of a face." It's worth it...I think. The best part is seeing the brilliance of colors, the worst is seeing EVERY SPECK OF DUST IN THE HOUSE. Boy, was I living in a hazy fool's paradise before! With a zealot's eagle eyes, I roam around armed with a spray bottle of cleanser. [Out, darned spot! Take that, and that! *Sound effects of more futile shpritzing and polishing.*]

Issue 90 will be out in October, and I'll double up with *FL 91&92* in early December to make 1996's six issues. Yes, dear patient readers, cataract surgery today is a piece o' cake, and I'm grateful. □

HMM. ALL THE SILVERWARE POLISHED, THE BRASS LAMPS POLISHED. THE KITCHEN CURTAINS WASHED. MUST BE TIME FOR CLARA TO WRITE THE FELIX LETTER.



Illustrations by Clay Geerdes and other artists as noted.

The *Felix Letter*, P.O. Box 7094, Berkeley, CA 94707, has been published independently by Clara Felix since 1981 and supported solely by subscriptions. Descriptive list of back issues & sample, \$1. Year's subscription (6 issues) \$12; Two-years (12 issues) \$22.

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