180DEGREEHEALTH REPORT

FEBRUARY 2010 ESSENTIAL FATTY ACIDS VOLUME 2, ISSUE 2

Now that the busy chaos of Groundhog Day holiday festivities are over, I think it's time to explore one of the great and promising frontiers of dietary manipulation for health enhancement. That's honing in on this omega 6/Essential Fatty Acid thing that I've been ranting about on the blog lately. It's certainly a whole new world of thought-stimulation. I'm not ready to sell sucrose-sweetened soy bars yet, but Barry Sears may not be all bad.

-Matt Stone, Author and Independent Health Researcher

FEBRUARY FEATURE ARTICLE…

THE EFA "BRAINGASM"

A few weeks ago I put a poll on the 180 Blog. The poll asked readers what they thought the greatest dietary evil was – assuming one could only choose one.

But the question was rigged. Fructose was the first menu option, and the poll was posted right next to Robert Lustig's video, which is a 90-minute gang beating of fructose. Of course we're all thinking fructose at that point. Plus, my elaborations on fructose outnumber my elaborations on polyunsaturated vegetable oils (the 2nd place finisher), by a factor of at least ten to one. Of course fructose was the gold medalist!

But let it be known, my anti-diet tangents aside, that refined sugar and polyunsaturated fats both deserve plenty of attention. Perhaps equal amounts. My recent blog posts and podcast, which I hope everyone has had a chance to review, were based on the prevalent ideas that omega 6, a type of polyunsaturated fatty acid, accumulates at the cellular level and leads to chronic inflammation.

Continued on page 3…

ON TAP IN THE JANUARY ISSUE:

DEPARTMENTS:

The Old School… **Broda Barnes (page 11)**
Resurrection of pivotal work from the past
It was hard to come up with an old-schooler that was down on PUFA, but Broda Barnes, the first old-schooler to make a 2nd appearance, steps up to the plate.

Slap yo' Mama… **Spicy-a Meat-a Ball-a (page 9)**
Kitchen tips, recipes, and more
Hey my little Bambinos, what's a matta you? Ah shut-up-a-you-face! It's a-time-a for mama to make-a meat-a ball-a! Have no idea what I just said? Good. It's probably best. I do speak English when it comes to laying down a simple and tasty plan of action for making some good Italian meatballs.

Buy/Bye the Book… ***Enter the Zone*, by Barry Sears, 1995 (page 14)**
Monthly book review
Barry "Beaker" Sears may be a weirdo with sponsored Zone cruises and be a peddler of the most vile ingredients posing as health food that the world has ever seen. Let's not "throw the baby out with the bathwater though" shall we. Barry has pioneered the role of EFA's in the world's most prominent chronic diseases in the popular press, and he be droppin' knowledge on some things that shouldn't be overlooked.

Bustin' a 180… **Keeping Your Head OUT of the Game (page 18)**
Inspiring words from Mr. 180
I do all this research and writing so that every time you sit down for a luscious dessert or eat a French fry you're supposed to have an anxiety attack and whip yourself mercilessly with self-generated guilt right? Um, I don't think so.

… The EFA "Braingasm" Continued

There's no doubt that, when it comes to omega 6 and omega 3 fatty acids, you literally are "what you eat." Humans are not ruminant animals, and when fed lots of these polyunsaturated fats, our cells and tissues literally transform to take on a new, more polyunsaturated form. Blood testing reveals that citizens in Western nations, the United States in particular, are accumulating massive amounts of Arachidonic Acid (AA) in our cells, derived from omega 6 fatty acids in our diet. The ratio of AA to what is considered to be its anti-inflammatory counterpart, EPA (Eicosapentanoic Acid), is reaching ratios in the neighborhood of 12:1, when 1:1 – 3:1 is considered ideal by the guesses of most.

Okay, I know I just used some big words there, but don't get lost. I promise I'll do what I can to simplify this science, and the theories I'm exploring, as this very complex but invigoratingly interesting topic is explored over the next several pages…

Author Barry Sears, the geek-tastic superhero of Zone Diet fame, has been one of the leading voices in the importance of the tissue accumulation of these fats. It is significant because many of the most powerful pro-inflammatory molecules that our body makes in response to stress, infection, etc. are derived from AA. It isn't too far of a leap in logic to say that having excess of the base material used to make our most powerful inflammatory biochemicals makes us more "inflammatory."

There's no doubt that humans are becoming more and more "hyperinflammatory." Ya see, it's not that cat dander or pollen or air pollution or gluten have become increasingly prevalent or malicious over the past several decades. But allergies to all kinds of foods, substances, materials, chemicals, etc. are going through the roof. Asthma, an even more intense form of reaction, has seen huge spikes in its prevalence among today's youth. Autoimmune disease, the extreme manifestation of OVER-immunity and over-reaction, is accelerating at a rapid rate. Autism, perhaps the fastest rising disease on earth, is thought to have several allergy and autoimmune connections as well. Having an autoimmune disease, by the way, is the number one condition that predisposes a mother to give birth to an Autistic child.

What's common about all of these health conditions is the presence of massive cytokine activity. Those cytokines, such as some of the Interleukins, prostaglandins, and Tumor Necrosis Factor Alpha (TNF-Alpha), are all synthesized from AA – that blessed type of omega 6 that our cells and tissues are becoming increasingly chock full of.

Cytokines are our bodies' first, and most vicious line of defense. Our immune system is an amazing thing, but the work our cytokines does comes with some serious collateral damage. Remember, when you feel ill, are having an allergic reaction, and so on – this is all due, not necessarily to a pathogen, but as a result of your body's response to that pathogen. Fundamentally, it's our own

immune system and inflammatory reaction that makes us feel ill – not the pathogen itself.

Of course, we want our immune systems to get into the trenches and zap the invaders, but what if our species, collectively, is entering into a realm of overly-enhanced immunity? What if all this business is overkill? What if the system is backfiring on us, due to a change in diet that forces our immune system, by sheer volume of omega 6 ingestion, into a state of friendly-fire suicide? Basically what I'm asking is, what if our immune systems are just too good?

That's the theory of Barry Sears and many others, who argue that to counter this excess we need to consume less omega 6, a great idea, and ramp up our production of a substance that counters this immune system hypervigilance – omega 3 as EPA (from high-dose fish oil).

This strategy seems, on the whole, to help many people. It is definitely not a panacea. Going big on fish oil and cutting out most processed vegetable oils does change the ratio in the tissues of AA to EPA very reliably. This knowledge, all things considered, is a big leap forward for health and nutrition science.

Taking tons of EPA has some down sides too. It is, fundamentally, no better than AA, it's just that it can help counter some of AA's effects. Too much EPA is just as problematic as too much AA, perhaps even more so, as it is literally the most unstable and easily-oxidized of all fats. Processing it into a highly-concentrated fish oil does massive damage to the fat itself, turning much of it into a pathological, free-radical inducing substance. When used in such large doses as are required to make significant headway in changing omega 6 to 3 ratios, it is pretty much a drug at that point, and has the typical side effects of many drugs, just as many 180 followers have pointed out (several people on the blog chimed in to say that their health was noticeably impacted in a negative way by taking fish oil).

So, this is the most prominent mainstream theory on reducing inflammation by moderating omega 6 to 3 ratios. Eat less omega 6, but more importantly, take a ton of fish oil. A start perhaps, but not complete.

I propose that by far the greater problem, and by far the most effective means at achieving a healthy, low level of omega 6 tissue concentration is to limit omega 6 (what a concept!). Without question, the most significant step one can take towards addressing this issue is to cut out vegetable oils – the most highly-concentrated form of omega 6 fatty acids (which later get converted by the body into AA). It may very well be, however, that eating a diet that is substantially higher in fat than most people eat, that extra measures be taken to limit all forms of omega 6 in the diet (by limiting our intake of most nuts and seeds, peanut butter, poultry skin, and pork fat).

Maybe if we were starting off with a clean slate, we wouldn't need to do such things. We aren't starting off with a clean slate though. Our species has been steadily accumulating these fatty acids in our cells, stacking them up generation to generation, since vegetable oils became widely used starting at the turn of the

20th century. To make real progress, we might have to go beyond limiting vegetable oils, and really make a concentrated effort to cut back omega 6 enough to not only keep our omega 6 levels from getting worse, but bring them back to ideal levels.

It's just a thought. Don't get your panties in a wad just yet. If I do it diligently and become completely asthma-free you'll hear a much more decisive message. I do have my suspicions about why the Weston A. Price Foundation authors and followers often come up short in their health pursuits though. They may be veggie oil haters, but they put away enough nuts, poultry fat, and lard to undermine whatever benefits veggie oil omission might've given them aside from trans fat and free radical reduction. They have come up with great answers to the question "what is a healthy diet," but are still largely unaware of the best "fix the damage done diets." End side tangent.

But I'm not yet convinced that widescale omega 6 deletion is really the easiest and most effective means of achieving what we're trying to achieve here – reduced inflammation. A researcher and maniac named Brian Peskin proposes that getting "parent" essential fatty acids from unadulterated seed oils is the way to go. I have to admit, I like the general idea. Just as I've found that unrefined carbohydrates are the antidote to the damage done by refined carbohydrates, so too would I like to believe that the antidote to consuming lots of refined oils, both omega 6 veggie oils and omega 3 fish oils, is consuming plenty of minimally-refined, unadulterated oils. It makes sense, as this puts all the condemnation, not on a particular natural food constituent, be it omega 3 or omega 6, but makes food processing the scapegoat. Man do I hate me some food processing!

The problem then becomes a quality issue, not a quantity issue, and we're all back to eating pecan-crusted pork chops. I hope that's the answer, as you guys know that I'm all about keeping the dietary advice as absolutely simple as it can possibly be while keeping you and your families reliably healthy (IMPROVE is actually the concept, not maintain). The message to eat lots of unadulterated, nutritious food – and lots of it at the exclusion of refined garbage, is working out marvelously for many, and it's one hell of a palatable message. It's worth it just on the basis that it makes life much more enjoyable, even if it didn't come without all the benefits to digestion/dreams/libido/skin/temperature regulation/glucose tolerance/moods, and so on.

So hey, you betcha I'm gonna give Peskin's research a thorough review, eagerly hoping that his work is completely drenched with validity. But watching a 50-minute powerpoint lecture by him on Youtube is certainly not enough to have me completely overcome my own personal hunches and override everything I've processed on the subject over the last several years. He's got my attention though.

Confused yet? No? Still think there's a clear-cut route to take to reduce inflammation? I got a cure for that.

There's yet another theory that has its own distinction, and is highly controversial and exciting all at the same time (kind of like 180!). And that's

generating a replacement polyunsaturated fatty acid from within our own bodies – an omega 9 fatty acid called eicosatreinoic acid, or "Mead acid." This is controversial because our bodies cannot make omega 6 or omega 3 fatty acids, which are considered essential for life. That's why they are referred to as the "Essential Fatty Acids," or EFA's. But there is evidence, and a small sect of researchers – one of them being Ray Peat who you may already be familiar with (the dude's even weirder than I am), that suggest that EFA's are not essential, and that the mainstream health/medical/nutrition community has been tragically misled.

I have little doubts that simply cutting back on omega 6 would naturally lend itself to having less destructive inflammatory reactions to various stressors we encounter in our daily lives – from pathogens to environmental toxins to allergens. But could going so low in both omega 6 and omega 3 stimulate a substance even more anti-inflammatory? The following excerpt, describing Mead acid and its potential superiority over EFA's, was taken from one of the more intriguing websites that I've ever found, Joe Blair's "The Scientific Debate Forum:"

"The causes of death today are quite different from those before the middle of the twentieth century (in the USA, at least). Before circa 1950, most Americans ate a diet that led to a polyunsaturated fatty acid (PUFA) called Mead acid being incorporated into their cells. You need PUFAs in your cells, because they are used for clotting and the inflammatory process, among other things. However, if you eat a diet rich in the typical dietary "essential fatty acids," your body will displace the Mead acid with another one, called arachidonic acid (AA).

AA is released from cells just as Mead acid is, when there is a major stressor. However, AA is much more biochemically acid than the Mead acid, so inflammation can be more intense if you have AA in your cells. What is even worse (for most people) is that AA, because of its extreme biochemical reactivity, is also released when there are minor stressors, unlike the Mead acid. Inflammation can become chronic much more easily (with AA in your cells), and chronic inflammation is the cause of most "chronic disease" in nations like the USA. On this site, you will find plenty of evidence which demonstrates that if you follow the disease process back to its source, chronic inflammation, and by definition, having AA in your cells, is the underlying or "root" cause."

Interesting eh? What we sometimes forget, as we've seen the rates of obesity, type 2 diabetes, asthma, allergies, autoimmune disease, and autism increase dramatically since the late 70's when high-fructose corn syrup began replacing other sweeteners and the world received a decisive anti-saturated fat message, is the change in dietary fat that occurred in sync with those changes. It wasn't until the 1950's that consumption of soy and corn oil really took off, but when the anti-saturated fat campaign went majorly mainstream, suddenly beef tallow and coconut oil were shunned in favor of vegetable oil. More butter was replaced with margarine, more lard with shortening, and vegetable oil became the staple household and restaurant cooking fat.

Plus, our reliance on food "products," which had been using and promoting vegetable oils for quite a while, increased dramatically at that time as well.

This is not a lead-in to a big switch in focus from avoiding refined carbohydrates and focusing on bringing the metabolism back to optimal ranges. Vegetable oil consumption and inflammation aside, the great 20th century observers like Weston A. Price, T.L. Cleave, and Denis Burkitt all noted that refined carbohydrates were enough, by themselves, to cause widespread degeneration. Broda Barnes was able to prevent most chronic disease in his patients simply by administering a dosage of desiccated thyroid that kept the human metabolism running in the optimal range. Clearly there's more to the story than "omega 6-rich vegetable oil."

But it's some good thought for food, and the implications behind omega 6 PUFA being a chief culprit in chronic disease, and certainly heightened allergenicity and autoimmunity, is one that cannot be ignored. It might just be that the reduction of all polyunsaturated fatty acids to the point where Mead acid is produced could take many people's health and vitality to the next level – getting more metabolic bang per buck than what a lackadaisical approach to the "high everything diet" can produce.

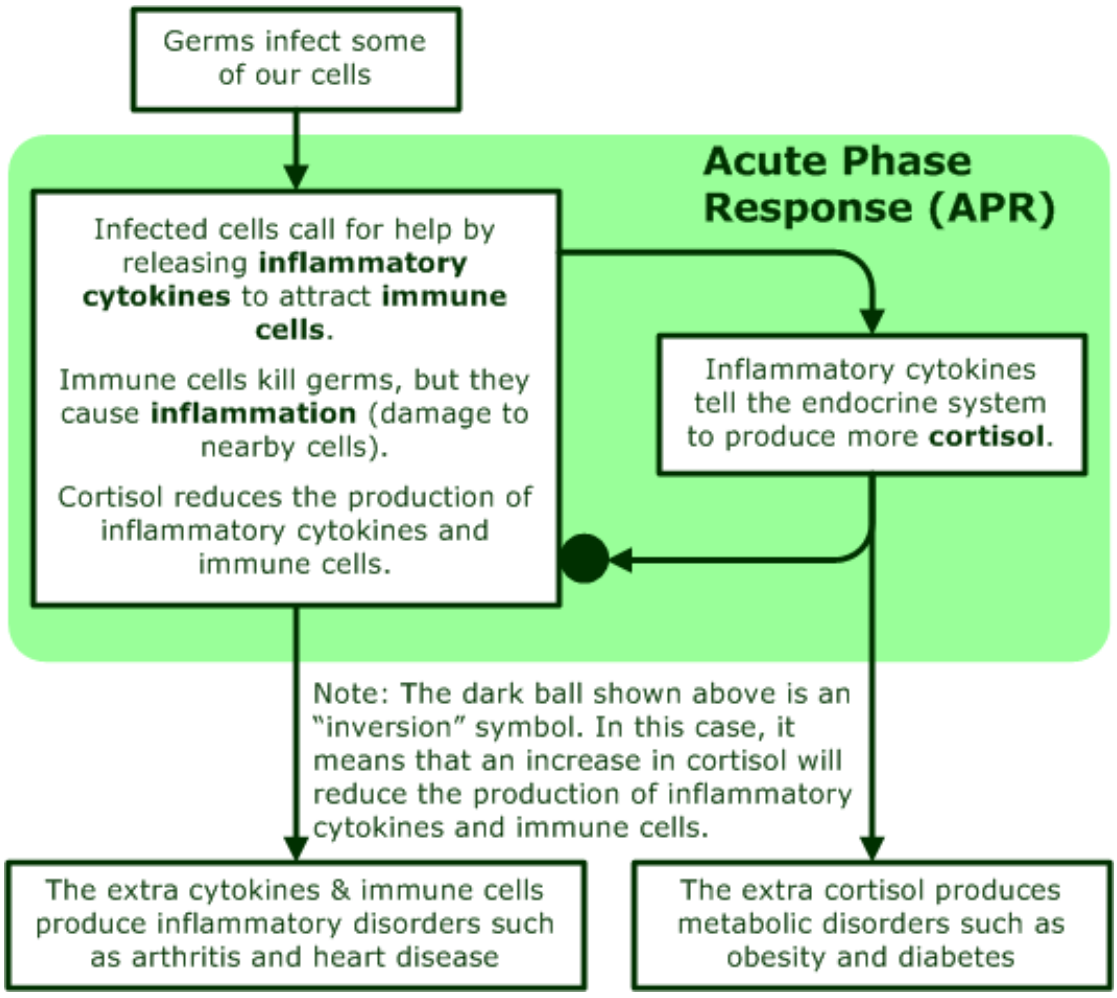
More important is the marketability of a diet that induces essential Fatty Acid Deficiency (FAD) intentionally. There's no catchier name for a diet book title than *The FAD Diet*.

In summary, knowing that the most aggressively inflammatory cytokines are primarily derived from Arachidonic Acid (AA), the role that these cytokines play in triggering the release of cortisol must be acknowledged. Cortisol, for those who haven't read *180 Degree Diabetes* yet, is one of the chief culprits in causing insulin resistance and metabolic syndrome. Take a close look at cortisol researcher Russ Farris's schematic (following page) on how cytokine release leads to diabetes, obesity, arthritis, and heart disease (in other schematics he also mentions autoimmunity as well) – all of which are now thought to be diseases of inflammation:

If it is indeed infectious "germs" that start this cascade, then we really have two simple theories. Either the germs cause chronic illness as Farris believes, or our immune response to those germs causes chronic illness. I think it's far more likely to be the 2nd option. Our two primary defenses are to minimize our inflammatory reaction and maximize our immune system by creating maximal nutritional reserves. This equates to a low PUFA diet with huge amounts of unadulterated, nutritious food.

Of course, there are countless triggers of inflammation to be taken into consideration as well, such as mental stress, free radicals (from toxins and rancid polyunsaturated fats, i.e. vegetable oil), injury, overexercising, lack of sleep, and more. All play a role in hypercortisolemia. And many do not have high cortisol levels. Rather, their health problems stem from adrenal fatigue and low cortisol levels, not overproduction.

Note: I've also been led recently to consider that these same inflammatory cytokines have the ability to induce leptin resistance, making our bodies



unresponsive to the actions of the hormone leptin. Interestingly, leptin appears to be a hormone released directly from the brain based on its communication with the body fat. The body fat seems to be the outside source of information regulating the body temperature/metabolic rate, the appetite, and whether or not to trigger fat burning or fat storage. This only makes too much sense – that when the body's fat stores are high, the fat tissue communicates with the body to release leptin, which raises metabolism and fat burning and lowers appetite to keep the system regulated. When fat stores are low, leptin levels drop which encourages appetite and fat storage while the metabolism drops in response. Leptin, in other words, provides the feedback mechanism to regulate body fat levels and metabolic rate within very tight parameters. Leptin resistance is by far the most likely reason body temps are

low, and NOT hypothyroidism, which is why most thyroid blood tests reveal levels within the normal range (supplementing with thyroid hormones can override the leptin malfunction and get results as Broda Barnes showed, but it is not getting to the root of the problem).

Other than inflammation, the strongest evidence in looking for a dietary cause of leptin resistance is fructose. And the general message is strengthened: Eat food, as much as you want (sometimes more if your metabolism is low), while steering clear of refined fructose and vegetable oils.

But don't get too caught up in the belief that vegetable oils, and not fructose, are the cause of all this chronic inflammation. Richard Johnson states:

"Fructose appears to set the stage for inflammation via several mechanisms. We know that cells exposed to fructose become temporarily depleted of energy, which can cause them to become inflamed. We also know that fructose triggers the endothelial cells lining the inner walls of arteries to produce factors that attract white blood cells, contributing to inflammation. What's more, fructose stimulates the production of uric acid. Studies show that uric acid can directly induce inflammation inside the arteries."

More on the leptin connection in the March issue of 180DegreeHealth Report (and/or at the blog… I may not be able to shut up for a whole month about leptin).

For now, keep on keepin' on. This, and recent work I've been doing is not meant to catapult everyone into a new, powerful omega 6 phobia. This is merely inquiry into the theoretical world of omega 6's relation to inflammation, and inflammation's relation to chronic disease. This is just an introduction as to why I'm pondering this issue in such great detail. It deserves our attention.

SLAP YO' MAMA... *SPICY-A MEAT-A BALL-A*

The title, for those of you who are confused by it, is "Spicy Meatball" in Italian. Well, it's at least spicy meatball with a clichéd Italian accent. Okay, I won't wear out the Italian cheap shots (yet), but just let me have fun for a minute with this.

So-a what-a we-a are-a gonna make-a is-a spicy-meat-a ball-a. I hope-a you-a gonna like-a.

Okay, I think I'm done now. This was inspired by a box of Titaroni pasta given to me as a humorous gift by my friend

Tommy. It was tit-shaped "booby" pasta. What can you expect from a guy whose favorite joke is, "What kind of bees make milk?..... Boo bees!"

Anyway, where were we? Oh yes, Italy. They eat meatballs there I hear.

On a recent trip to the corporate food Mecca of Denver, CO, I had some meatballs at Maggiano's restaurant, one of many U.S. corporate restaurants that do not necessarily make me "proud to be an American where at least I know I'm free."

Other than giving me a stomachache, as corporate food has a tendency to do sometimes, I did really enjoy the meatballs. I realized how long it had been since I'd eaten meatballs, much less made them. Aurora seemed to be pretty fired up about them too, and wanted me to whip up a batch when we got back home.

Well, I haven't actually gotten around to it yet. But I'm thinking about 'em! So here's a fun project for those who are enticed by the idea of wolfing down some meatballs, with or without the giant wad of white flour noodles that typically accompany them (I've heard good things lately about 'brown rice pasta,' but I'm still unsure about it).

Spicy Italian Meatballs

Ingredients:

1 pound ground pork
2 pounds ground beef
1 cup bread crumbs (make sure they are unseasoned and without too many weird ingredients if using store-bought crumbs)
3 eggs
1 finely-minced yellow onion
3 cloves minced garlic
Fresh herbs, preferably a combination of oregano, parsley, and thyme
Heaping tablespoon of crushed red pepper flakes
2T Paprika (optional)
Lots of sea salt

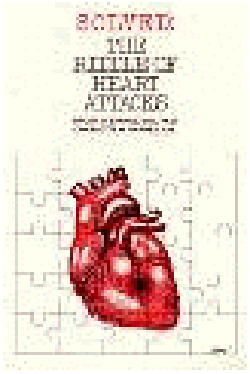
Directions:

1) First off, before I forget, this approximate recipe without eggs and breadcrumbs makes a wicked homemade bulk sausage.
2) Mix all the ingredients together, adjusting quantities of the ingredients above to suit your tastes.
3) Taste seasoning to make sure it's good by frying up a little chunk. It may need more fire (red pepper flakes) or more salt. If so, add some.
4) When the seasoning is right on, form into large balls. The larger they are, the less hassle they will be to cook later.
5) In hot expeller-pressed coconut oil, pan-fry the meatballs, browning them on all sides.
6) Add the meatballs to a crockpot or pot on the stovetop, cover well with tomato sauce and/or tomato

juice, and simmer for several hours.

7) P.S. – To make a simple homemade tomato sauce, Cook 1 diced onion in 1 stick of butter on the lowest heat possible (sweat) until the onions are extremely soft. Takes at least a half hour, sometimes longer. Then add canned tomatoes at about a 6:1 tomato to onion ratio. Simmer for 30-45 minutes and season with salt and fresh herbs. And when it's done, you must call it "gravy" like a good Italian-American does.

Enjoy. If you get them just right you will sprout dark, curly hair all over your arms, chest, and back and will feel a sudden urge to watch *The Godfather*. (I hope this didn't offend anyone. I wrote that strictly to entertain my hairy Italian friend who recently became a 180 Member… *Norm*!).



THE OLD SCHOOL… BRODA BARNES

This month calls for a little different format for the old school. The main reason is that there was very little differentiation between saturated and unsaturated fat in the old days. To an even lesser degree, differentiating between omega 6 and omega 3 was more or less unheard of until Dr. William Lands pioneered the science of the diet's relation to eicosanoid formation in the late 70's. In other words, there really wasn't an omega 6 specialist in the old school.

But there was one of my favorite old-school authors that was very eager to take on the topic of polyunsaturated fat in the diet, and brutalize it mercilessly. Polyunsaturated fat and its potential effects on the inflammatory processes of the body were not his specialty, but he certainly made a point to mention them.

That old school hero was Broda Barnes, the first old-schooler to make not one, but TWO appearances in the *180DegreeHealth Report* – both February 2009 and February 2010.

Without further ado, I give you some PUFA pimp slaps from the man himself, as taken from his difficult-to-find classic and expensive-to-obtain, *Solved: The Riddle of Heart Attacks* (1976). Feel free to say "oh snap" after some of his quotes if you feel it necessary. I won't make fun of you.

p. 70
"It is a sad commentary on the American scientist that the potential danger of unsaturated fats had to be brought to their attention by an abnormal number of cases of cancer in patients receiving diets high in unsaturated fats for the prevention of heart disease. In 1971 a report by Pearce appeared in Lancet, vol. 1, page 464, entitled, 'Incidence of Cancer in Men on a Diet High in Polyunsaturated Fat.' Why was this article sent to England where unsaturated fats have never been popular? Was it refused publication in American journals? It seems strange, but regardless, there has been an attempt to sweep this information under the rug… there were almost twice as many deaths from cancer in the group on polyunsaturated fats."

p. 71
"It seems foolish to administer a poison requiring an antidote for neutralization (Vitamin E that is, but fish oil could certainly be applied to that analogy as well)*; it would appear more logical to avoid the unsaturated fats in the first place."*

p. 71
"In 1967 Norkin reported more cirrhosis of the liver in rats fed corn oil than in those fed a saturated fat, coconut oil."

p. 72
"Now 19 years after the warning that unsaturated fats might cause cancer, polyunsaturated fats are being thrust upon the public by the press, radio and TV. Similar evidence from a pesticide, a food additive, or a pollutant in the environment would call for immediate action with cessation of the use of the suspected item until it was proven safe."

p. 73
"…unsaturated fats hasten aging of the skin, are toxic to both animals and man, and furthermore, that the use of such diets has not prevented heart attacks."

p. 73
"The American Cancer Society was shocked at a 5 percent rise in cancer the first seven months of 1975 when a one percent had been anticipated. In the frantic search for causes of the rise in cancer certainly the increasing polyunsaturated fats for the past 25 years cannot be neglected. The housewife followed the scientists' advice 25 years ago when the circumstantial evidence indicated that heart attacks might be avoided by crowding in more polyunsaturated fats and avoiding animal fats. Now it is apparent that the saturated fats were not causing the rise in heart attacks… The evidence that the polyunsaturated fats are toxic and may cause cancer is not theoretical; it is far more conclusive than the evidence that saturated fats were causing heart attacks."

p. 74
"It is time for the housewife to make another decision. Can she afford to continue the unsaturated fats with their demonstrated toxicity and run the risk of cancer in her family? It was difficult to deny the members of the family their eggs, bacon, etc., but mothers have a way of achieving a desirable change. Now she has found that a mistake was made and she should be just as eager to reverse her stand and prevent some new tragedies. It will be hard to ignore the propaganda that the saturated fats cause

heart disease. That propaganda will stop abruptly when the housewife passes up the unsaturated fats and fills her basket with cream, butter, eggs, lard, fat meat, and the other goodies which the family has been craving. The propaganda for unsaturates is perpetuated only by the vested interest of the manufacturers. The few pennies saved on the budget by purchasing cheaper margarines and oils may be a poor investment compared to the prolonged and horrible death from cancer. If the polyunsaturated fats are safe, let the manufacturers prove it on animals before a new plague develops from the false statements that unsaturated fats will prevent heart attacks."

"Everyone should have the privilege of playing Russian Roulette if it is desired, but it is only fair to have the warning that with the use of polyunsaturated fats the gun probably contains live ammunition."

And I can't help but mention this fantastic quote by T.L. Peter Cleave, while we're on the subject:

"…no one who has any reverence for the human body will ever choose to substitute these new processed oils for animal fats of ancient lineage."
For those of you who aren't familiar with Dr. Barnes, to help satiate your curiosity – he felt the answer to the riddle of heart attacks was solved by keeping the metabolism high. He still acknowledged that the process started with tissue damage to the arteries… "Damage to the tissue becomes evident first."

Although I have no definitive answers as to why keeping the metabolism at full throttle was able to prevent heart attacks with almost 100% certainty in Barnes's patients, what is clear is that keeping the metabolism high must, in some way, inhibit inflammation – either by keeping arterial invaders such as *Chlamydia pneumoniae* out, or keeping the inflammatory process subdued. Yet again another reason to be mindful of omega 6 in the diet, cut out vegetable oils for sure, but NOT be overly paranoid about omega 6 overload regardless of how compelling and logical the science may be. In other words, don't throw out the bacon yet!

BUY/BYE THE BOOK…
ENTER THE ZONE

Oh no I am not going to do a review of the Zone Diet! Shut up! Oh yes I am. I am because Barry is one of the biggest loudmouths about the significance of these inflammatory cytokines that I be goin' on and on about this month.

I have already done a review of Sears's 2008 *Toxic Fat* in a prior 180DegreeHealth Report, but let's take it back to the beginning.

As most of you know, Barry Sears is kind of a douchebag. I mean, let's be honest. He sells sucrose-sweetened soy protein bars. How on the mark could this guy really be?

But like all researchers, the area that he has focused on is one source of information with a lot of potential. He just happened to miss the boat by buying into the whole glycemic index thing, which makes him a big fan of low G.I. fructose, still thinks that saturated fat and dietary cholesterol probably clogs arteries, and thinks that starving yourself on 1,500 calories per day is the key to a long, happy life.

Overall, well, let me just say that if I went on one of his Zone cruises, people would be shouting "man overboard" at the top of their lungs. The only question is, would it be me or him? It would certainly be one of us, but not both, on board that vessel.

Okay fine. This isn't really a review. Most cannot even conceive of what Sears writes about anyway, even if it is profound in spots. Rather, this is going to be a little sermon on Sears-ism, as his

information about inflammatory processes at least appears to be quite cutting-edge.

I do believe that Sears will be looked at, someday, as quite ahead of his time. Right now, most intelligent people in the health and nutrition sphere would like to have a time at his head – with a blunt object. Let's take it easy on the poor guy though. I mean, does he really sound that off the mark to you? Taken from the intro to *Toxic Fat*:

1. *Being overweight or obese is not your fault. Nor is it a consequence of being morally inferior. It is due to the adverse interaction of your genes with radical changes that have taken place in the American diet over the past 25 years.*
2. *If you have a chronic disease (diabetes, heart disease, arthritis, cancer, or a neurological disorder), it's quite likely that a major underlying cause of your current condition comes from seemingly well-meaning governmental agricultural programs initiated more than 30 years ago.*
3. *Everything you have heard about the 'cause' and the 'cure' for the current obesity epidemic is probably dead wrong.*

That governmental agricultural program, of course, is the corn subsidy. The drastic dietary change it triggered was a huge increase in corn oil and high-fructose corn syrup consumption.

The name of that book, *Toxic Fat*, refers to Arachidonic Acid – the fatty acid that much of this excess omega 6 dietary fat accumulates as. His basic thesis is that this fat, circulating in our blood, comprising our cells and tissues, is pathological and hyperinflammatory in such quantities.

"If the flow of toxic fat into the bloodstream is left unchecked, the result is a checklist of the chronic diseases that represent the bulk of our current health-care expenditures, such as:

Allergies, Asthma, Autoimmune diseases (arthritis, lupus, and others), Cancer, Heart Disease, Inflammatory diseases (Crohn's disease, ulcerative colitis, and others), Neurological disorders (Alzheimer's, depression, ADHD, and others), and Type 2 Diabetes.

The appearance of each of these chronic diseases can be viewed as different manifestations of Toxic Fat Syndrome."

He also states:

"…it is only when you begin to mix excess insulin (coming from cheap carbohydrates) with excess omega-6 fatty acids (coming from cheap vegetable oils) that you get increased production of toxic fat."

I find this to be particularly revealing. Sears talks about how insulin is also involved in inflammatory processes, which is probably why fructose plays such an intricate role in inflammation as well. It may not cause a temporary rise in insulin to the same levels of starches, but, if it is indeed as capable of inducing insulin resistance as some researchers suggest, then it could very well lead to a trigger that causes excessive inflammatory cytokine production from the omega 6 that we ingest (which

otherwise might remain inactive). Sears explains insulin's key role in the original Zone book:

"Excess arachidonic acid is your worst biological nightmare. It's the building block for bad eicosanoids, including thromboxane A2 (which causes platelet clumping), PGE2 (which promotes pain and depresses the immune system) and leukotrienes (which promote allergies and skin disorders). In fact, arachidonic acid is so potent and so dangerous that when you inject it into the bloodstream of rabbits the animals die within three minutes.

The balance of DGLA to arachidonic acid in every cell in the body determines whether or not good or bad eicosanoids are made when that cell is stimulated by its external environment. The balance of DGLA to arachidonic acid is the foundation of the Zone, and it is entirely controlled by the activity of this single enzyme – delta 5 desaturase.

The more active the delta 5 desaturase enzyme, the greater the potential for manufacturing more arachidonic acid. The less active the enzyme, the greater the manufacture of DGLA. Obviously, you want your body to make more DGLA and less arachidonic acid, so that it can make more good eicosanoids and fewer bad ones.

What controls the activity of delta 5 desaturase? Hormones – specifically, insulin and glucagon. Delta 5 desaturase is activated by insulin and inhibited by glucagon. So at the molecular level it's the dynamic balance of insulin and glucagon that allows you to regulate this enzymatic valve, and regulate it with a laserlike precision no drug could hope to achieve."

Okay, let me translate into its real-world significance. The body, as I've said many times, has a system of diametrically-opposed feedback mechanisms. There are no "good" or "bad" eicosanoids. You either have balanced, healthy production, or you do not. What Sears is saying is that with the massive quantity of vegetable oil that we ingest and that has accumulated into our cells, any level of chronic high insulin levels will trigger a massive inflammatory imbalance. Actually, Sears believes postprandial insulin is something to focus on, whereas I think this is totally erroneous. Only higher than normal insulin levels as triggered by insulin resistance (not directly related to the amount of glucose in your diet) is capable of upsetting the balance.

It does so because the insulin triggers the activity of the enzyme – delta-5 desaturase as identified by Sears, to produce more AA than DGLA out of the omega 6 that we ingest.

So the theory of Sears is that hyperinsulinemia plus lots of omega 6 in the diet = Hyperinflammation = Almost all chronic disease. He calls the combination of a hyperinsulinemia-inducing diet with lots of vegetable oil "the perfect nutritional storm."

But as you know, I'm a firm believer that the primary contributor to hyperinsulinemia is NOT starches, but excessive fructose consumption – and to a lesser degree alcohol, caffeine, and other drugs.

What this all boils down to – and my overall conclusion as a result of four solid years of broad, sweeping research on human health, is that lots of fructose combined with lots of omega 6 polyunsaturated fat is the one-two punch needed to produce illness. Remove one of the two variables and your chances of living a long, healthy life are greatly improved. Remove both variables, while paying close attention to top off nutritional reserves with very wholesome food sources and bring the basal temperature up – and steadily-improving health is almost guaranteed.

Damnit Barry. I would LOVE to hate you. But unfortunately, I'll have to continue to hate to love you. His books, truth be told, are probably all worth reading. Just don't end up eating Zone bars, chugging fish oil, and being fat and starch phobic. There are better, smarter ways to address achieving what Sears is attempting to achieve.

BUSTIN' A 180… KEEPING YOUR HEAD OUT OF THE GAME

I remember when I was 14 I went to train with a professional batting coach for baseball. This guy was good. I learned endless amounts of fundamentals. Studied videos of the great sluggers of the day – from Will Clark and Tony Gwynn to Kirby Puckett. Hand position, hip-rotation… I had it down. I could wail away at the batting cage, hitting would-be home run after would-be home run. I felt that he had turned me into some kind of slugging prodigy.

Man was I excited for baseball season to start so that I could wow other players and my coaches with my freakish skill. I was going to be a high-school Freshman that year, and was already feeling like I would be one of the top players on the team.

But something strange happened. When my coach started throwing live balls at me I was helpless, hopeless. It was like being in the Twilight Zone. I seemed to have less hand-eye coordination than I did at 12 years old, having multiple homerun games against All-Star pitchers.

I was never a good hitter again in my life. I never hit another homerun. Not

one. In fact, although I was a good enough athlete to start in centerfield (and truth be told, even at 14 I was better than many professional outfielders), my hitting was so piss poor that for my entire Freshman and Sophomore year the coach used a designated hitter for me. In college, I was relegated to pitching – as pitchers didn't hit. This despite being perhaps the best outfielder, infielder, and catcher on the entire team!

It seems that my mind, and all this newly-learned material jinxed me for life. My former athletic instincts were overshadowed by newly-learned mental technique. It ruined me.

I bring this up because one thing I would hate, more than any other, would be to put such a burden on 180 followers looking to get healthy. Our bodies almost always know better than our minds when it comes to what is good for us. Sure, addictive substances like refined sugars and stimulants have the ability to trick our finely-attuned senses, but that doesn't mean that our bodies aren't still a temple of wisdom guiding us through life and guiding us to the foods we need.

Don't take this issue on omega 6, or any issue of 180DegreeHealth Report, blog post, podcast, or eBook – and use it to fuel some dietary phobia. That's not the point of what we're doing here. Sure, we'd all like to improve our health and use the discoveries being made at 180 to get us there, but we have to be realistic and relaxed about doing it or we're doomed to failure.

Just the other day a woman contacted me, panicked, about not being able to get rid of her chocolate addiction. It seems like all her dietary evils – sugars, Diet Coke, coffee, most alcohol, and vegetable oils were out of her diet. The only thing that remained was chocolate. What do you think I said?

I told her that chocolate wouldn't kill her, not to worry about it, to keep eating well and maybe she'd lose interest in it someday, to enjoy it when she ate it instead of resenting her inability to fight cravings, and to focus on the excellent fats and antioxidants found in chocolate. Most of all, I pointed out that all the steps she'd taken so far would probably ensure her as long, and as healthy of a life that she was capable of living, with or without the chocolate.

In other words, all this reading and research that you do on health is great. I think it's so much fun and so interesting. I love wrapping my mind around these health puzzles, reading what everyone has to say about certain topics, and increasing my understanding of the big picture of health with each new page I turn. That's why I called this EFA issue a "braingasm!" I've been loving it! So much new stuff to think about. It's my crossword puzzle. My final episode of *Lost*. My close NFL playoff game.

But when it comes to sitting down and eating a meal, you've got to let that crap go. Learning is something that you do in practice. When it comes game time, it's time to clear the mind and focus on the experience. Enjoy it. Let go. Let loose.

Sure, refined fructose is not good for us. It's a net-negative on our health, and omega 6 might also be as well considering how much of the fatty acid we've accumulated in our bodies, as a species, over the last century. But was I

thinking about that last night when I ate some homemade Thai-style fried bananas with pineapple coconut ice cream? Hell no! I was thinking about how good it tasted, and how happy my dinner guest was.

I guess what I'm really trying to say is, learn up, but lighten up. The whole point of health information is to use it to enhance our lives. So see to it that whatever health information that you cross paths with is used to make your life better, not more limited, restricted, and paranoid. Your food choice for a meal isn't a life and death matter. I think we can achieve the best of both worlds with a concentrated effort to do so – eating healthy while also being able to enjoy, cherish, and be grateful for those unhealthy foods that cross our lips as well.

Or in the words of Mr. Miyagi from *The Karate Kid*, "Balance Daniel San. Must have balance."

Send me Gifts for my Birthday on Saturday!
-Matt Stone
www.180degreehealth.com