

Modern Nutrition – Problems and Helpful Hints

Our perspective changes when looking at the radical and rapid changes that have occurred in the Western Diet, not just in our sorts of food over the course of the 20th century, but also in our food relationships, all the way from the soil to the meal. The ideology of nutritionism - looking at fibers and carbohydrates and vitamins rather than looking at carrots, beans and greens - is itself a part of that change. A firmer grip on the nature of those changes is necessary to begin to know how we might make our relationships to food healthier. These changes have been numerous and far-reaching, but consider as a start, these four large-scale ones:

I. From whole foods to refined.

The case of corn points up one of the key features of the modern diet. Instead of Native American blue or red corn, we now have high fructose corn syrup, which has no fiber, no vitamins, just an appetite stimulant which contributes to obesity. This exemplifies a shift towards increasingly refined foods, especially carbohydrates. Call reductionism. Humans have refining grains since at least the Industrial Revolution, favoring white flour (and white rice), even at the price of lost nutrients. Refining grains extends their shelf life (precisely because it renders them less nutritious to pests) and makes them easier to digest, by removing the fiber that ordinarily slows the release of their sugars. Fast food is fast in another sense, too. It is to a considerable extent predigested, and therefore too quickly absorbed by the body, raising blood sugar levels. It is doubtful that human beings will evolve a super insulin system to handle sugar as a main food group. The widespread acceleration of the Western Diet offers us the instant gratification of sugar and the speediness of food, at our expense.

II. From complexity to simplicity.

Simplification is a word that covers changes that industrialization has made in the food chain. Chemical fertilizers simplify the chemistry of the soil, which in turn appear to simplify the chemistry of the food grown in that soil. Since the wide-spread adoption of the synthetic nitrogen fertilizers of the 1950s, the nutritional quality of produce in America, according to the USDA figures, declined significantly. Some researchers blame the quality of the soil for the decline; others site the tendency of modern plant breeding to select for industrial qualities like yield rather than nutritional quality. The trend towards simplification of our food continues on the food chain. Processing food depletes them of the many nutrients, a few of which have been added back through “fortification” and “enrichment”, for instance, folic acid in refined flour or vitamins and minerals in breakfast cereal. But food scientists can add back only the nutrients food scientists recognize as important. What are they overlooking?

Simplification has occurred at the level of species diversity too. The astounding variety of foods on offer at the modern supermarket obscures the fact that the actual number of species in the modern diet is shrinking. For reasons of economics, the food industry prefers to tease its myriad processed offerings from a tiny group of just four plant species: corn, soy beans, wheat and rice. When you consider that humankind has historically consumed 80,000 edible species and than 3,000 of these should have been in widespread use; this represents a radical

simplification of the food web. Why should this matter? Because humans are omnivores, requiring widely varied nutrients to be healthy. It's hard to believe that we can get anything we need from a diet consisting largely of processed corn, soy beans, wheat, and rice.

III. **From greens to grains.**

It is no coincidence that most of the plants we have come to rely on are grains; these crops are exceptionally efficient at transforming sunlight into macronutrients – carbohydrates, fats, and proteins. These macronutrients can be profitably transformed into animal feed and processed foods of every description. Also, the fact that grains are durable seeds, meaning that they can be stored for long periods of time, making these plants particularly well suited to the needs of industrial capitalism. However, seeds also function to store fat.

The needs of the human eater are another matter. The over consumption of excessive and poor quality protein, fat, and carbohydrates (macronutrients) represents a serious threat to our health, as evidenced by the soaring rates of obesity and diabetes. But the undersupply of vitamins and minerals (micronutrients) may cause a threat just as serious. Put in the simplest of terms, we are eating a lot more seeds and a lot fewer leaves, a tectonic dietary shift with full implications of which we are just beginning to glimpse. To give an example, when cheese and salt are added to food, or worse yet, become the chief ingredient of food, a harmful ingredient has been added that gives a burden to the body to correct. In contrast, adding a garden-variety thyme to season the food adds at least 38 antioxidants to improve metabolism.

Most people associate omega-3 fatty acids with fish but fish get them from green plants, specifically algae, where they all originate. Plant leaves produce these essential fatty acids (“essential” because our bodies cannot produce them on their own) as part of photosynthesis. Seeds contain another essential fatty acid, omega-6. Without delving too deeply into the biochemistry, the two fats perform very different functions in the plant as well as the plant eater. Omega-3s appear to play an important role in neurological development and processing, the permeability of cell walls, the metabolism of glucose, and the calming of inflammation. Omega-6s are involved in fat storage (which is what they do for the plant), the rigidity of cell walls, clotting and the inflammation response. (Think of omega-3s as fleet and flexible, omega-6s as sturdy and slow). Since the two types of fats compete with each other for the attention of important enzymes, the ratio of omega-3s and omega-6s may matter more than the absolute quantity of either one. Thus, too much omega-6 may be just a problem as too little omega-3.

In modern food production, omega-3s spoil more readily and are less stable than omega-6s and we have selected the omega-6s in food production practices. By using partially hydrogenated oils to render them solidified and non-perishable, essential fats of both types end up being eliminated. Industrial meat is also raised on low-fiber seed carbohydrate or meat meal rather than leaves and has fewer omega-3s and more omega-6s than pre-industrial meat used to have. Official dietary advice since the 1970s has promoted the consumption of polyunsaturated vegetable oils, most of which are high in omega-6s (corn and soy especially). Thus, without realizing what we were doing, we significantly altered the ratio of these two essential fats in our diets and bodies with the result that the ratio of omega-6 to omega-3 in the typical American today stands at more than 10:1. Before the widespread introduction of seed oils at the turn of the last century, it was close to 1:1 and paleo diets have always contained a 2:1 or 1:1 ratio. This is one reason that omega-3 deficiency is associated with

rising rates of depression and learning disabilities in our modern society. Nutritionism classically argues for taking omega-3 supplements or fortifying food products, but because of the complex, competitive relationship between these fats, adding more omega-3s to the diet may not do much good unless you also reduce your intake of omega-6.

IV. From food culture to food science.

The last important change wrought by the western diet is not, strictly speaking, ecological. But the industrialization of our food that we call the Western Diet is systemically destroying traditional food cultures. People use to rely for guidance about what to eat on the national or ethnic or regional cultures. Culture is really just a fancy word for Mom, the figure who typically passes on the food traditions. The novelty and glamour of the Western Diet with its 17,000 new food products introduced every year, and the marketing muscle used to sell these products, has overwhelmed the force of the tradition and left us where we find ourselves; relying on science and journalism and marketing to help us decide questions about what to eat. Nutritionism, which arose to help us better deal with problems of the Western Diet, is largely now helping the industry to sell more food and to undermine the authority of traditional ways of eating. We are now turning to the healthcare industry to help us “adapt”. Medicine is learning how to keep people alive whom the Western Diet is making sick. It is good business for the sick industry. Capitalism has turned a problem that they have created into lucrative business opportunities: diet pills, heart bypass operations, insulin pumps, bariatric surgeries. But while fast food may be good business for the healthcare industry, surely the cost to society – an estimated 200 billion dollars a year in diet related healthcare costs – is unsustainable.

V. Beyond Nutritionism.

How might we plot our escape from this focus on nutrients and in turn from the harmful effects of the modern industrialization of these nutrients? In theory, nothing could be simpler – stop thinking and eating that way – but this is somewhat harder to do in practice given the food environment we now inhabit and the loss of sharp cultural tools to guide us through it. There are some simpler principles of healthy eating. These few rules of thumb that follow, at least point us in the right direction.

1. Eat food. Though in our current state of confusion, this is much easier said than done. So try this: Do not eat anything your great, great, grandmother would not recognize as food. (Sorry, but at this point, Moms are as confused as the rest of us, which is why we have to go back a couple of generations, to a time before the advent of modern food products). There are a great many food-like items in the supermarket your ancestors would not recognize as food (breakfast bars? nondairy creamer?). Stay away from these items. Eat as close to the garden as possible.

2. Avoid even those food products that come bearing health claims. They are apt to be heavily processed, and the claims are often dubious at best. Do not forget that margarine, one of the first industrialized foods to claim that it was more helpful than the traditional food it replaced, turned out to give people heart attacks. When Kellogg’s can boast about its Healthy Heart Strawberry-Vanilla cereal bars, then health claims have become hopelessly compromised. Realize that the American Heart Association charges food makers for their endorsement. Do not take the silence of the yams as a sign that they have nothing valuable to say about health. It is a lot easier to slap a health claim on a box of sugary cereal than a carrot, with the perverse result that the most healthful foods in the supermarket sit there quietly in the produce section,

while a few aisle over the Cocoa Puffs are screaming about their newfound whole grain goodness. Even more ironic, those “whole grains” frequently are whole corn and whole rice, which still are white carb drugs which have little or now fiber (still remember carbohydrates without fibers are simple sugars no matter what the carbohydrate source).

3. Especially avoid food products containing ingredients that are: a) unfamiliar, b) unpronounceable, c) more than five in number or ingredients that contain high fructose corn syrup or hydrogenated oil. None of these characteristics are necessarily harmful in and of themselves but all of them are reliable markers for foods that have been highly processed. For instance, a typical Nutrigrain bar is made of six sugars with shortening and a few chemicals to make it an addicting, non-perishable carb drug.

4. Visit the farmer’s market when possible. You will not find any high fructose corn syrup at the farmer’s market; you also will not find food harvested long ago and far away. What you will find are fresh whole foods picked at the peak of nutritional quality. Precisely the kind of food your great, great, grandmother would have recognized as food.

5. Pay more, eat less. The American food system has for a century devoted its energies and policies to increase in the quantity and reduction in price, not to improve quality. We do not particularly need desserts and sugars between meals or meat with each meal. It gives us our diseases of affluence – namely heart disease, cancers, and diabetes. It is shameful that most of us can afford to eat well in America but do not. Americans spend, on average, less than 10% of their income on food, down from 24% in 1947, less than the citizens of any other nation, and less than their health care costs. Pay more for food well grown in good soils, whether certified organic or not, to contribute not only to your health (by reducing exposure to pesticides) but also to the health of others who might not themselves be able to afford that sort of food: the people who grow it and the people who live downstream and downwind of the farms where it is grown.

We have fatally separated our agricultural and meat industries in America. Our agricultural lands are becoming depleted of nutrients and we are growing four macronutrients, all grains of poor quality, most of which goes to feed our bloated chemical and steroid-dependent animals on huge food lots, the waste from which has become unmanageable. We are throwing ourselves into economic collapse for the sake of feeding our meat supply. The ironic thing is that we were not designed by God as meat eaters. We happen to have omnivorous capacity, primarily for the plants considering our many molars instead of fangs and canines, our padded fingers instead of claws, our long guts designed to digest plants. Our animal-based diet is leading to scores of GI diseases that involve infections, diverticulosis, and cancers, to name a few.

Our animal foods increase estrogen and cholesterol production, the body’s steroids, which then can lead to elevated cancer occurrence (the media exploits better cure rates – there are certainly more to cure) and the explosion of heart disease and vascular disease. We must look at the laws of nature, not corporate profits. When looking at serving sizes since the 1950s, it is easy to see that both food type and food amounts have become absurd considering our sedentary nature. We are dieting on the very foods, such as sugar, that are, by definition, appetite stimulants. When one lives on refined white starches and sugars with farmed meats and dairy fats, there has to be management with diets, restrictions, and Western disease drugs. Thus “eat less” is not necessarily what we need; but rather eat lower calorie, plant-

based whole foods, and let meat, dairy, and starches be condiments, and salts and sugars come second to seasonings and spices.

6. Eat mostly plants, especially leaves. There is no question that the majority of our nutrients come from fruits and vegetables. The antioxidants, fiber and omega-3s that are in leaves are of utmost importance in maintaining the human body. One must realize that whole foods with an emphasis on leaves and peels are primary fuels for the human body. It is a good idea to accept and respect the notion of complex carbohydrates for our fuel. By eating a plant-based diet, you will be consuming far fewer calories since plant foods (except seeds) are typically less energy dense than the other things you might eat. Vegetarians and near-vegetarians are always healthier than human carnivores with a diet heavier in cooked protein. Never believe for a second that protein is primary fuel for your metabolic engine. Treat meat more as a flavoring than as food.

7. Eat according to the rules of a traditional food culture. Most folks in traditional cultures are healthier than Westerners. In borrowing from a food culture, pay attention to how a culture eats as well as to what it eats. For instance, in the case of the French Paradox, it is not the dietary nutrients that keep the French healthy as much as the habits: small portions, no seconds, no snacking and things like alcohol in good quality and moderation.

8. Cook. And if you can, plant a garden. Taking part in the intricate and endlessly interesting processes of providing for your sustenance, is the surest way to escape the culture of fast food and values such as food being cheap and easy. The food you grow yourself contributes to your health long before you sit down to eat it. So you might want to think about putting down this article and picking up a spatula or a hoe. Why not have a few blueberry bushes instead of trimming and throwing away your shrubs. You can grow a lot of organic cheap tomatoes in your backyard with just a few plants and then make cheap, high-quality sandwiches rather than buying expensive white bombs of weight-gain foods that are then managed with expensive diets and drugs.

9. Eat like an omnivore. Try to add new species, not just new foods to your diet. In other words, do not get a new flavor of sugar cereal, but branch out with the types of foods that go in that bowl. The greater the diversity of species you eat, the more likely you are to cover all your nutritional bases. Health is one of your greatest blessings, which empowers and enables yourself to be self sufficient and efficient. Biodiversity in diet means more than monoculture in the fields. The vast monocultures that now feed us require tremendous amounts of chemical fertilizers and pesticides to keep from collapsing. Diversifying those fields will mean fewer chemicals, healthier soils, healthier plants and animals and in turn, healthier people. The food web is all connected. Plant-based nutrition for you is a natural solution for our economy, environment and our health. Plant your roots in healthier soils.

The above is drawn from “The Age of Nutritionism – How Scientists Have Ruined the Way We Eat”, The New York Times Magazine, January 28, 2007, by Michael Pollan, also recent author of The Omnivores Dilemma.

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