

The Hidden Dangers of Fast and Processed Food*

Overview

The fundamental concern as we look to reform health in America is the known reality that most chronic diseases that afflict Americans are predominantly lifestyle induced; and the belief is that the vast majority of heart attacks and strokes could be prevented if people were willing to adopt healthy lifestyle behaviors. In addition, healthy lifestyles would impact a significant number of cancers which are also believed to be related to lifestyle exposures, especially to obesity, cigarettes, and other toxins.

Over the past 50 years, the health of Americans has gotten worse, and now 71% of Americans are overweight or obese—not 66%, which was reported 5 years ago.¹ That means a staggering 100 million people in America are obese. Today, eating processed foods and fast foods may kill more people prematurely than cigarette smoking.²

Authorities determined the 71% figure by classifying people with a body mass index (BMI) over 25 kg/m² as overweight or obese. Yet in long-lived societies such as in the “Blue Zones” (Ikaria, Greece; Sardinia, Italy; Okinawa, Japan; the Nicoya Peninsula of Costa Rica; and Loma, Linda California) and wherever we find groups of centenarians, we observe a healthy BMI below 23 kg/m², not 25 kg/m². If we use above 23 kg/m² as the demarcation for overweight or obesity,

then we find that 88% of Americans are overweight. And out of the approximately 10% that are of normal weight, the majority of those so-called “normal weight individuals” are either cigarette smokers, or suffer from alcoholism, drug addiction or dependency, autoimmune disease, occult cancers, inflammatory disorders, autoimmune conditions, digestive disorders, irritable bowel syndrome, and other illnesses that lower their body weight. Therefore, perhaps that only about 5% of the American population is at a normal weight as a result of eating healthy and living a healthy life. A recent study documented that only 2.7% of Americans adopt a relatively healthy lifestyle by combining exercise with healthy eating.³ The Standard American Diet (SAD) is clearly not a healthy diet.

I use the term “Fast Food Genocide” because most don’t understand the depth and breadth of the harm as a large segment of our society eats a diet *worse than* the dangerous SAD. Many people recognize that junk food, fast food, processed food, white flour, sugar, maple syrup, honey, agave nectar, and all the junk people are eating contribute to in obesity, diabetes, heart attacks, strokes, dementia and cancer, but many don’t realize the strong causative role an unhealthy diet may have in mental illness. Currently, 1 in 5 Americans suffers from a psychiatric disorder. And

many people don’t realize the harm that processed foods have on Americans living in urban areas where they don’t have easy access to whole, fresh foods.

These unfortunate folks live in what we call “food deserts,” with reduced availability to fresh fruits and vegetables. Because of the limited access to supermarkets, they eat more unhealthy fast and processed foods and end up having 7 times the risk of early-life stroke (before age 45), putting people in nursing homes in their 30s, 40s, and 50s.⁴⁻⁷

The vulnerable poor in these areas also have double the risk of heart attack, double the risk of diabetes, and 4 times the risk of renal failure⁸⁻¹⁰; Unfortunately, the decrease in life span due to food inequality is shocking but rarely discussed. A substantial proportion of people in these urban environments are overweight, prediabetic, or fully diabetic. Researchers determined that compared with other areas in America with easy access to supermarket food, that the YPLL (Years of Potential Life Lost) for an overweight diabetic living in a zone classified as a food desert was a shocking 45 years!^{11,12}

A link may even exist between fast food, processed food, commercial baked goods, and sweets and destruction of brain cell and a lowering of intelligence. Candy and sweetened baked goods may even stimulate the brain in an addictive

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fashion, which can lead to more serious illnesses.

The nutritional fundamentals accepted by the World Health Organization and most nutritional authorities today include vegetables, beans, nuts, seeds, and fruit as healthy foods; and salt, saturated fat, and excess sugar as disease causing. Excessive amounts of animal products may lead to premature aging, increased risk of chronic disease and higher all-cause mortality. Multiple studies have been published on hundreds of thousands of people, followed for decades showing that the objective endpoint of death is increased with higher amounts of animal product consumption.¹³⁻¹⁷ Furthermore, refined carbohydrates may not just lead to being overweight and diabetic but also contribute to dementia, mental illness, and cancer.¹⁸⁻²¹ There is considerable evidence today that heart disease is not only promoted by saturated fat and increased animal products but also by refined carbohydrates, including white rice, white bread, sugar, honey, maple syrup, and agave nectar.²²⁻²⁵

Research has shown that excess calories shorten lifespan, whereas moderate caloric restriction slows the aging process and protects the body and brain. Americans consume more calories than any other population; and they consume foods, many of which have minimal or no nutritional value (soda and alcohol as examples). So let's consider the individual who is consuming 50 excess calories per day. What will be the short- and long-term result? Fifty excess calories per day, over and above your basic metabolic needs, over a 10-year period, adds about 50 pounds of extra body weight. The excess weight increases the risk of multiple chronic illnesses, cancers, and also takes many years of life away from the individual simply as a result of consuming only 50 calories a day too many.

Conversely, if an individual consumed 50 calories a day less than their metabolic requirements what would happen then? Would he or she become too thin,

anorexic, and unhealthy? Would their bones fall apart? Obviously not! When you moderately caloric-restrict, even a small amount such as 50 to 100 calories a day, weight remains about the same, the person is slim, not too thin, and healthy. He or she will have a lower body fat percentage, and the skeletal mass, bones, and muscle mass are strong. In this scenario, the metabolic rate would slow down accordingly. The respiratory quotient, (the number of calories lost through respiration) would decrease, the body temperature would lower, and thyroid function would decrease slightly, all lowering the metabolic rate, which overall may result in a slowing of the aging process. The secret to a long life and freedom from chronic disease may be simply to moderately reduce calories in order to slow down our metabolic rate. The only behavior proven scientifically to dramatically increase life span in every species of animals, including primates, is to lower caloric intake while maintaining an environment of micronutrient adequacy, assuring that we have exposure to every micronutrient humans need. The American diet is also deficient in antioxidants and phytochemicals that are needed for normal immune function, for maximizing brain health, protecting against dementia, chronic illness, cancer, and premature aging.

A *nutritarian diet* is designed to establish *excellent micronutrient intake without excess calories*. A nutritarian diet is designed to help prolong human life span, decrease the risk of cancer, and keep the brain functioning well for many years. This principle is represented by the equation I use: $H = N / C$, which means your healthy life expectancy (H) is proportional to the micronutrient (N) per calorie intake (C) over your life span. This means that we are encouraged to seek out foods that are rich in nutrients. We should try to limit or exclude empty-calorie foods and drinks. We should also limit or avoid calorically dense foods, and not eat for recreation or when we are not hungry.

A nutritarian diet is rich in phytochemicals and antioxidants. It is a

vegetable-based, utilizing a wide assortment of colorful vegetables, root vegetables, green vegetables, peas, beans, mushrooms, onions, nuts, seeds, and some intact whole grains. While the standard American diet and most traditional diets are grain-based and lack sufficient exposure to the broad spectrum of antioxidants and phytochemicals (with their anticancer effects), it is important to note that not all plant-based diets are equally cancer-protective. As an example, a rice-heavy, macrobiotic diet limits phytochemical diversity, and brown rice produced in this country is contaminated with arsenic, extensively documented by Consumer Reports and white rice is refined, high glycemic food, and therefore not a healthy starch.

In comparison, the SAD is almost the opposite of a nutritarian diet. Over 55% of the SAD's calories are processed foods, and about 33% of calories come from animal products. If we are looking at the amount of fresh produce (fruits and vegetables) consumed in America, the food consumption data reports about 10%; but in actuality, it is less than 5%, because they include French fries and ketchup in the definition of "produce!" The point here is that processed foods such as bread, pasta, salad oil, mayonnaise, doughnuts, cookies, rice cakes, breakfast bars, chips, soda, candy, and popcorn do not contain a significant micronutrient benefit. A piece of chicken is like a bagel, because they are both rich sources of macronutrients (calories), but neither one contains the necessary amounts of micronutrients, especially the antioxidants and phytochemicals only found in plants.

The high glycemic white flour products with added sweetening agents, flood the bloodstream with glucose without fiber, nutrients, or phytochemicals; and these baked goods are also high in acrylamides and advanced glycation end-products, further increasing the glycoproteins in our tissues. The resulting spike in glucose leads to abnormally high amounts of insulin, which will also promote angiogenesis, which fuels the growth of fat cells, increases cellular

replication and tumor growth. The liberal amount of animal protein (including chicken which many incorrectly believe is the more healthy meat) consumed by most Americans promotes excessive insulin-like growth factor-1 (IGF-1), making a synergistic “sandwich” of insulin and IGF-1, which may accelerate aging of the brain, interfere with cellular detoxification and repair, and promote cancer.²⁶ The SAD has created a nutritional disaster and a significant health crisis that will not be solved by governmental “health care reform.”

Now when we think about “fast food” we’re not just referring to the food in fast food restaurants. Fast foods include chips, soda, cookies, candy, breakfast cereals, bars, French fries, burgers, pizza, white flour baked goods, and all other high-calorie, low-nutrient foods that people often eat multiple times per day. These are processed foods and for many, are the primary source of calories. These fast foods have certain characteristics: They can be accessed easily and quickly; they don’t need to be prepared; they come out of a bag or box ready to go right into your mouth. You can eat them rapidly and they’re absorbed very quickly into the bloodstream. These fast foods typically contain multiple chemicals and synthetic ingredients. They are calorically dense, highly flavored, and nutritionally barren. Fast foods typically contain extra corn syrup, sugar, artificial sweeteners, salt, coloring agents, and other potentially disease promoting chemicals.

When calories flood the bloodstream rapidly they have dramatic biological effects. Let’s compare 200 calories of white bread to 200 calories of beans. The white bread would be metabolized into simple sugars (glucose) which enters the bloodstream in 5 to 10 minutes. This requires a rapid increase in insulin; and the rapid insulin response will remain for hours. On the other hand, the carbohydrates from beans will take much more time to be digested and, as a result these calories enter the bloodstream slowly. Essentially, the calories will trickle in over hours. When eating beans, a small amount of glucose enters the

blood each minute and therefore you won’t need much of an insulin response to deal with this amount of sugar. As mentioned above, the buildup of advanced glycation end products (AGEs) accelerates aging and chronic disease.^{27,28} When a diabetic suffers from kidney failure, blindness, or a leg amputation, a major causative factor is the buildup of AGEs in the tissues. Interestingly, these same glycated end-products and glycoproteins build up in the tissues of people who are not diabetic but who continually expose themselves to excess sugar and white flour products.

Next, it is important to understand that oils are also processed foods. When consumed, oil enters the bloodstream rapidly similar to high glycemic carbohydrates. Anything cooked in oil should be considered a fast food. Beans, nuts, and seeds are *whole foods* whose calories are absorbed gradually over hours. In contrast, the calories from oil are absorbed rapidly, and are largely empty calories (with insignificant micronutrients and no fiber)—a combination that leads to obesity, disease, and premature aging.

If I set up a buffet dinner and I asked all the guests to form 2 lines and then gave everyone on the right side a tablespoon of olive oil, and each of those on the left side an apple to consume while they were waiting in line, those who ate the 65-calorie apple will generally eat 65 less calories from the buffet. But those who had the 120-calorie tablespoon of oil will not usually consume 120 calories less. The oil contains neither fiber, nor micronutrients and contains nothing to decrease the appetite. A matter of fact, if you put oil on food, it may actually increase one’s appetite. Not only will these individuals not eat fewer calories—they will eat even more than the 120 calories from the oil.²⁹ When added or mixed into food, oil drives overeating behavior.

Nutrients and fiber are needed to control the appetite, so you consume a healthy amount of calories. My experience has demonstrated with thousands of patients, the more nutrient and fiber dense your diet becomes the

lower your drive to overeat.³⁰ This is extremely important, because even a moderate amount of extra fat on the body induces more rapid aging and increases the risk of diabetes, heart disease and cancer. A mild degree of caloric restriction becomes comfortable and achievable when the diet is high in micronutrients and fiber. When you have enough micronutrients and fiber in your diet, you don’t feel driven to overeat. But when you don’t have enough micronutrients and fiber in your diet, you become a food-craving, overeating machine.

Even worse is what happens when you eat food fried in oil because fried food may create carcinogenic and mutagenic aldehydes.³¹ Food that is fried such as in a fast food restaurant is usually cooked in oil that has been heated and used multiple times. One serving of French fries or fried chicken that is cooked in a fast food restaurant has 100 times the level of aldehydes designated as safe by the World Health Organization. Even the fumes are so toxic they increase the risk of cancer. People working in restaurants that fry the food, or those working in a movie theater making popcorn, have a heightened risk of lung and other cancers, even if they don’t eat any of the fried foods.³²

The explosion of fast food restaurants has significantly increased the intake of fried foods, and people are now eating 1000 times the amount of soybean oil compared with the early 1900s.³³ Humans never ate 400 calories of oil a day the way people do in America, especially in the Southern states—which are known for the highest stroke and heart attack rates in the world.³⁴ When you use nuts and seeds as your source of fat as opposed to oil, we see the opposite effect.

The Physician’s Health Study, the Nurses’ Health Study, Iowa Women’s Health Study, the Adventist Health Study—any study with large numbers of people followed for decades—demonstrates the relationship between nut and seed consumption and longer life span. We always have to give more credence to clinical research studies that involve large numbers of people

followed over decades using objective endpoints such as mortality. When you do that, you find that people who consume nuts and seeds regularly have lower cancer rates, lower cardiovascular death rates, lower sudden cardiac death, less irregular heartbeats, and an increase in life span.

A 2015 meta-analysis that included over 44 000 deaths demonstrated an almost 40% decrease in cardiovascular mortality for people eating nuts and seeds regularly (one serving a day). The European PleviMed study, which randomized 7216 individuals to nuts or olive oil as part of a Mediterranean diet showed a 39% decrease in all-cause mortality in the nut eaters.³⁵

When we look at the health implications of animal protein we should compare this type of nutrition with plant-based proteins, especially when an individual has cardiovascular disease, diabetes, obesity, or even cancer. When your protein comes from beans, nuts, seeds, and greens, the body more gradually assimilates a complete array of amino acids to make functional proteins and hormones, keeping IGF-1 production much lower. Adequate amounts of plant protein keep IGF-1 in that moderate range, between 100 and 175, which is where it should be. The average American's IGF-1 level is around 225, which is a level which has been linked to cancer promotion. When we eat a variety of plants, we get a full balance of amino acids, which slowly enter the blood—and we also digest some of the bacteria in the digestive track and some of the cells that slough off of the villi endothelium, enabling the utilization of partially incomplete plant proteins, now made complete. Conversely, when you eat large portions of meat, eggs, or cheese, the amino acid mix enters the bloodstream faster and because it is already biologically complete, it stimulates excessive amounts of IGF-1, again increasing the risk of cancer.³⁶⁻⁴³

The average American consumes 10 to 20 ounces a day of animal products, whereas the safe level of consumption is likely less than 10 ounces *per week*. My

estimate of 10% of calories as an upper limit of safe consumption is for a person with favorable genetics and is still likely more animal products than ideal for the nonelderly adults. It may be the case that under 5% of calories from animal products would be more ideal for life span and for facilitating disease reversal. Of course, any diet designed to optimize health should include a broad array of colorful plants with phytochemicals and antioxidants, which have been shown to increase life span and prevent cancer.

The animal products served at fast food restaurants are making the health of the population much worse, creating dangerous carcinogens from the food being grilled, barbecued, and fried at high temperatures. The World Health Organization has classified processed meats (hot dogs, sausage, bacon, and lunch meats) a class 1 carcinogen. AGEs are also highest in barbecued and fried animal products which also contain cancer-causing chemicals such as heterocyclic amines, polycyclic aromatic hydrocarbons, and lipid peroxidases, which are mutagenic.

There are 2 phases of the digestive cycle: the anabolic phase, when you are eating and digesting, and the catabolic phase, when digestion has ceased. When you are eating and digesting food, the body turns those calories into stored glycogen, increasing fat storage and the storage of waste. During this phase of the digestive cycle, growth hormones and fat storage hormones are activated.

When your body is finished digesting, you enter the catabolic phase, where the stored glycogen and fat are utilized for energy. This is the phase when your body can most effectively detoxify and enhance cellular repair. It is the time when the liver and kidneys work together to remove aldehydes, AGEs, and other toxic metabolites. Repair and healing is enhanced during the catabolic phase when you are not eating food.

Most Americans have made their bodies so toxic, that when they enter the catabolic phase of the digestive cycle, they feel uncomfortable. That means they feel fatigue, headache, stomach cramping or fluttering, anxiety, or other

uncomfortable symptoms when they stop digesting food and the body starts to mobilize waste and repair the damage. They typically interpret these symptoms as hunger or low blood sugar, because they feel better if they eat again—even though there is no biological need for calories at this time; and so they just get fatter and sicker. Every addiction has a “high” during the caloric rush and a “low” during withdrawal and repair from the disease-causing diet and resultant metabolic wastes and toxins that accrue from it. The American diet results in withdrawal symptoms and discomfort which promotes overeating and too-frequent eating. The lower the quality of the food consumed, the more discomfort felt when not eating and digesting, which makes it very difficult to maintain a healthy body weight.

If you're healthy and eating nutritious food, you feel nothing when you enter the catabolic phase, with no desire to eat again until glycogen stores are nearly exhausted. True hunger is a mild sensation felt in the throat and base of the neck. True hunger heightens taste sensitivity too, making eating more pleasurable. True hunger directs when you should eat and therefore it's more difficult to become overweight if you pay attention to the signs your body sends to your brain. Being overweight requires eating outside of the demands of true hunger, either recreationally or because of withdrawal symptoms from improper eating, stimulating the overconsumption of calories.

Enhanced detoxification—reduction of metabolic waste, aldehydes, and AGEs—occurs most effectively in the catabolic phase. That means the longer you live in the catabolic phase of the digestive cycle, the longer you live. If you finish dinner earlier or have a lighter dinner, and you have a 13-hour window between the end of dinner and the start of breakfast, you are going to live longer. A recent study had women with breast cancer followed for 10 years and found that those who finished dinner earlier and had a 13-hour window before the start of breakfast had a 26% reduction in the risk of death or recurrence from breast cancer.^{44,45} The increased

nighttime window was also linked to improved glycemic control and a lower HbA1c (glycated hemoglobin). They had no better diet, no different number of calories, no better food; they just finished dinner earlier.

The goal for excellent health is to eat as *infrequently* as possible. Many people believe just the opposite and eat frequent small meals that increase endothelial dysfunction leading to an increased risk for arteriosclerosis and cardiovascular disease. In addition, all the fad diets encourage people to make the wrong choices about what and when to eat. Many suggest the use of frequent high-protein meals so as not to feel the effects of normal detoxification. When the digestive track is continually busy, it results in accelerated aging.

Processed and fast foods are also high in salt. The fast and processed food manufacturers don't just put salt on the French fries and on the meat, they also put salt in the French fry batter and inside the chopped meat. They also include high fructose corn syrup in most foods. The added fat, sugar, and salt create a taste that makes people crave these foods, a sensation that many describe as an addiction. Both sugar and salt intake increase stroke risk, especially when consumed daily for years. Additionally, what is generally not appreciated is that the regular consumption of artificially sweetened soda creates more of a stroke risk.⁴⁶ High salt does not merely raise blood pressure; it also causes microvascular hemorrhaging, which damages the interior walls of the blood vessels in the brain and increases permeability and the propensity for hemorrhagic stroke.^{47,48}

Over the past 30 years, we've also seen an explosion of diabetes in Japan, Korea, and China, occurring at a lower body weight than we typically see in America, likely because the cumulative effects of eating more fast food, more oil and sugar, along with all of the white rice (a refined, high glycemic food), which they already had in their diet.

We know that people have the power to change when significant effort and attention is directed to the problems at

hand. With good information, emotional support, increased food availability and food preparation instruction, we have found people enthused and willing to work together for change. They don't have to be convinced of the tragic dangers of fast food; they see the obesity, diabetes, leg amputations, strokes, and blindness all around them. But if people don't have good information, then they don't have a choice. If they don't have access to healthy, affordable food, and they don't know how to make it taste good, then they are not given a chance to change.

The goal for physicians and other health care professionals is to work to transform America's inner cities into zones of nutritional excellence. Our nation's pride and heritage are based on the equal opportunity to achieve the American dream of prosperity and happiness. This critical information needs to be spread and put into action by community activists, teachers, educators, celebrities, health professionals, athletes, and politicians. The more people who know the critical importance of eating healthfully, and the more they take a stand, the greater the effect will be on transforming the health of all in America. By working together, we can save millions of lives.

Authors' Note

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