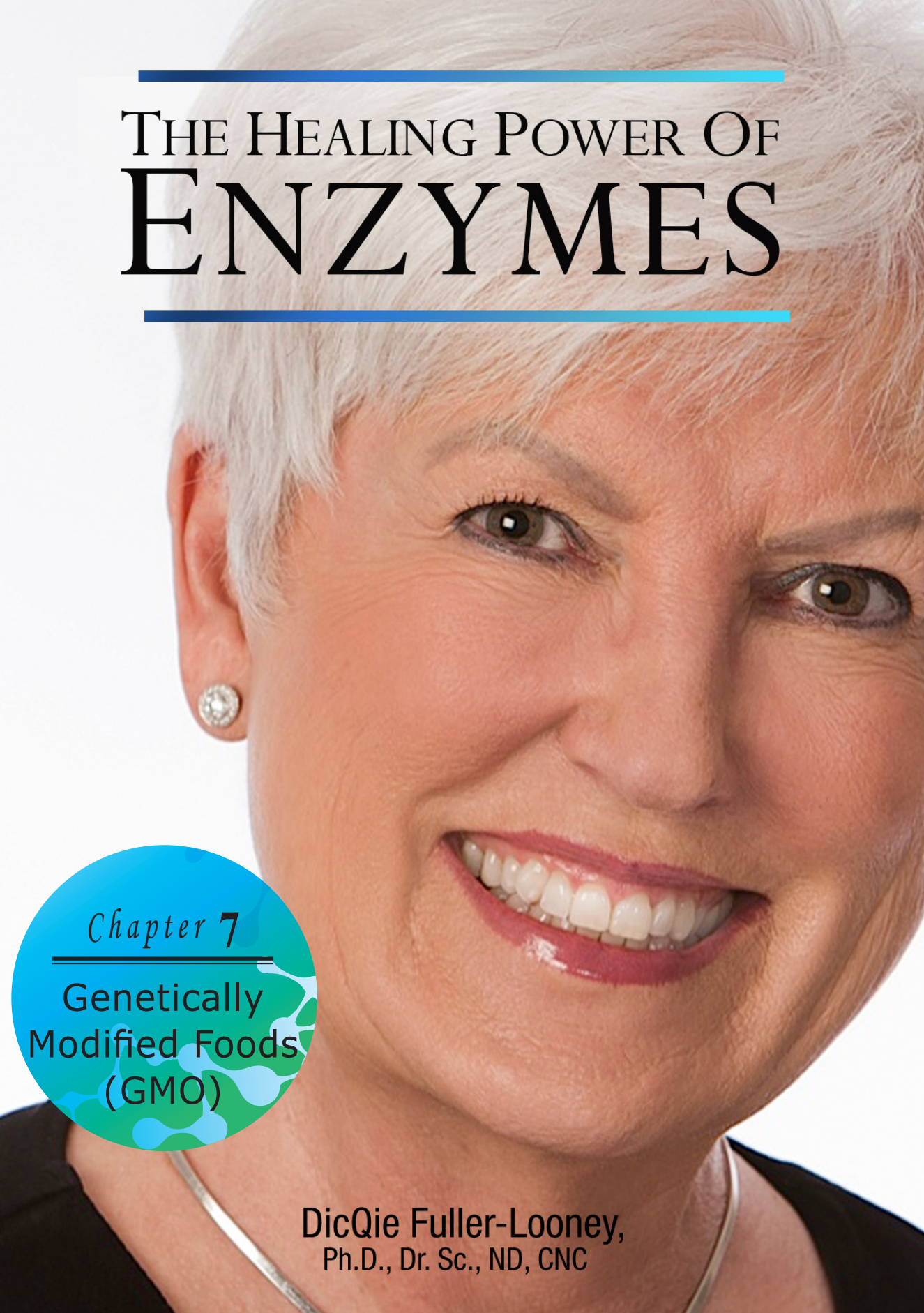
The Healing Power Of Enzymes



Chapter 7

Genetically Modified Foods (GMO)

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WHAT IS ON YOUR PLATE?

The Environmental Working Group, a consumer advocate organization, determined that Americans eat, on average, 193 pounds of GMO foods a year. The group justifiably asks: "If you were planning on eating your body weight of anything in a year, wouldn't you want to make sure it was safe to eat?"

Other countries are more concerned about these foods than we are. As a matter of fact, the United States is just about alone in not requiring labeling of GMO foods or the performance of safety tests to see whether these bizarre, chemist-created foods are harmless. As a result, about ninety percent of the corn, soy, and cotton now produced in the United States are GMO crops. When you eat processed foods like corn chips or breakfast cereal, seventy percent of what you take in has been made from GMO products.

These foods consist of genetically modified organisms (GMO) which are plants that have been created in laboratories and then planted by farmers. The most frightening part about these foods is that they are unlike any other foods that humans have ever eaten. And they were probably on your dinner plate last night and almost certainly in your snack foods (see facts on genetically modified organisms and sugar at the end of this chapter.).

THIS IS NOT A NEW PROBLEM

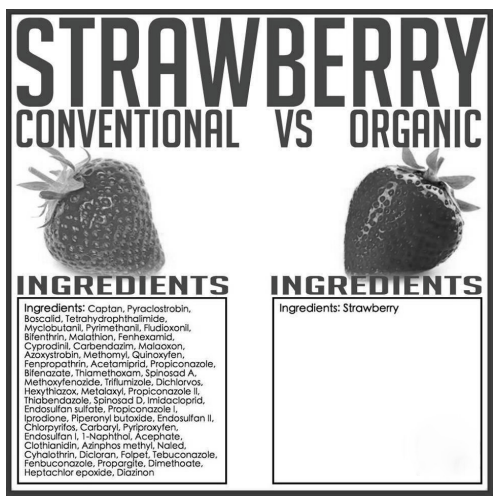
We started noticing that many of our young people coming into the clinic were experiencing abnormal amounts of digestive problems. Twenty years ago I had a radio show in Scottsdale where I started teaching about the genetically modified organisms in our food. One of my subjects was the "new tomatoes" that contained pork genes for stability on the shelf. Our government began using these GMOs in much of our produce and of course since then it has evolved into food that is no

longer nutritious. I started the show by recognizing vegetarians that made their decision to be vegetarian based on spiritual beliefs. I asked them if they were aware they may be eating pork genes in their vegetables or insect genes in their fruits.

Now, we are all aware of gluten sensitivities and many diverse gut-related dysbioses (referring to conditions with microbial imbalances on or within the body). Dysbiosis is most prominent in the digestive tract or on the skin, but it can also occur on any exposed surface or mucous membrane such as the vagina, lungs, nose, sinuses, ears, nails, or eyes. It has been associated with different illnesses like inflammatory bowel disease and chronic fatigue syndrome. Over the years, this has only worsened with the introduction of the genetically altered foods.

I mentioned that we are given everything we need in the first few days of our lives while yet an embryo. This includes our genetic instructions on how our bodies will handle their proteins. Proteins are extremely important because our bodies makes hormones from them — not only sexual hormones but those needed for our neurotransmitters, signaling systems, and repair of cells, tissue, organs, metabolic enzymes, and amino acid chains. The usage and importance of proteins cannot be numbered.

Consider now that genetically modified organisms are the DNA (proteins) from animal, insect, fowl, virus, and bacteria, and they are being spliced (interweaved) into our foods. Our bodies do not recognize these proteins from other species and will see them as an allergy. Eighty percent of our immune system resides in our digestive tract (small intestine), and we react to these proteins creating inflammation and allergies. Immune disorders, or the body turning on itself as in autoimmune disorders, are now worsening.



When I first started in practice, autism was recognized as affecting one in 1,000,000 children, and then it moved to one in 100,000. It wasn't long until it went to one in 150 children, and a few years ago it was one in thirty-seven children. It escalated when we started eating the genetically modified foods. Humans do not make digestive enzymes to properly digest these genetically modified foods, and they are creating incredible disorders. This is what the rise of gluten sensitivities are all about, since they are a protein mixed with a carbohydrate which our bodies do not recognize or know what to do with it.

If you want more information you can go online to the USDA site where they are very honest about the genetically modified foods. The following definitions were taken from Department of Agriculture website:

Genetics: Each person has an estimated twenty to 25,000 genes carrying three billion bits of information that constitute an instruction book for the body. When some of those bits become scrambled or otherwise distorted, diseases may result. Research has focused on the variations among people that can be used to create new treatments.

Agricultural biotechnology: A range of tools, including traditional breeding techniques, that alter living organisms, or parts of organisms, to make or modify products; improve plants or animals; or develop microorganisms for specific agricultural uses. Modern biotechnology today includes the tools of genetic engineering.

Genetic engineering: Scientists borrow a gene found naturally in one organism (called the donor) and supply it to a second organism (called the recipient). Scientists usually perform the exchange in a manner that ensures that the recipient organism will naturally pass the new gene along to its offspring. This includes manipulation of an organism's genes by introducing, eliminating, or rearranging specific genes using the methods of modern molecular biology, particularly those techniques referred to as recombinant DNA techniques.

Allergen: A substance, usually a protein, which can cause an allergy or allergic reaction in the body.

Allergy: A reaction by the body's immune system after exposure to a particular substance, often a protein.

I do hope you go to the site and see for yourself. There are many good books written about GMOs and some eye-opening DVDs. Go online or on Amazon and look at the ones that you would be most interested in reading.

My degrees in nutrition and health science no longer serve me with all the necessary tools to stay ahead of these ever-growing epidemic proportions of childhood disorders or dysfunctions. Genetically modifying our food leads to the changing of its protein structures by adding other modified proteins. No one can control when they turn themselves on or off after they are part of the food. Here lies our biggest threat to our immune and digestive systems.

Like me, you may be asking yourself, how is it we have come to a place where those gifted and educated in medical research and organism design are involved in our food supply? Genetically modified organisms in pharmacology for the treatment of disease is certainly appropriate, but that same science used in the adaptation of our food puts us in nutritional jeopardy. It would then become a food (nutrition) that is not nutritious.

How else can we explain what is taking place in our country in the last 3 decades? Over the years there has been a growing awareness of worsening and more complicated digestive challenges. They have brought on *forceful terminologies*. Are we becoming more sophisticated, or are our digestive needs becoming more aggressive? We used to call fungal problems "candida" overgrowth but now it is "fungal dysbiosis" (overgrowth of mixed yeast in our foods), or how about "cerebral allergies" (autism or anxiety)!

Our children are suffering in epidemic proportions from:

- Autism
- Allergies (up 400 percent and affecting one in four children)
- Asthma (up 300 percent)
- ADHD (up 400 percent and affecting one in eleven children)
- Gluten sensitivities / intolerances
- Celiac disease
- Diabetes
- Eosinophilic Gastritis (unable to break down all food)
- Early onset menopause or andropause
- Obesity (79.2% of Americans are obese yet many show signs of malnutrition)
- Toxins (now discovered in infant formulas)
- Food allergy emergency room visits (doubling each year)

Genetic engineering in modern agricultural technology has now modified our food sources beyond what our human digestive system can recognize or our immune systems can defend. Manipulated opportunistic microorganisms or molecular proteins added into our food sources, whether to lessen caloric intake or to protect our crops, may be the origin of our problems. Keep in mind that most of our immune system can be found in our digestive tract along with the body's inflammatory responses.

"Scientists . . . have detected the insecticidal protein . . . circulating in the blood of pregnant as well as non-pregnant women. They have also detected the toxin in fetal blood, implying it could pass on to the next generation." In case it's not clear, I want to reiterate that this new study in *Reproductive Technology* has confirmed that if you eat GMO foods that contain the insecticidal BT toxin, it appears that it will be transferred to your blood stream. As of now, about ninety percent of the corn grown in the United States is genetically engineered to either produce an insecticide or to survive the application of herbicide. In addition, about ninety-one to ninety-three percent of all soybeans are genetically engineered to survive massive doses of Roundup® herbicide. What this means is that nearly ALL foods you buy that contain either corn or soy, in any form, will contain GMO components unless certified organic by the USDA.

Again, the only way you can tell that you are not eating them is if the food has a green organic seal. Raw fruit and vegetables are marked as organic or have numbers on their package that start with nine on their label. If its number starts with three or four, they are grown on GMO soil, and the number eight means they are totally GMO. Most of the foods that are canned, boxed, or bagged generally contain GMOs. Grass-fed beef and hormone-free poultry and eggs will be marked organic or free of GMOs. I remember we used to feel safe when eating fresh wild fish, and then they came up with the genetically-modified salmon.

Just to show you how serious and yet ridiculous this has become, I have listed just a few of the engineered foods for which they received money from our government in grants and were given patents.

Scientists have worked on some thought-provoking combinations:

- Spider genes were inserted into goat DNA in hopes that the goat milk would contain spider web protein for use in bulletproof vests.
- Cow genes turned pigskins into cowhides.
- Jellyfish genes lit up pigs' noses in the dark.
- Arctic fish genes gave tomatoes and strawberries tolerance to frost.
- Potatoes that glowed in the dark when they needed watering.
- Human genes were inserted into corn to produce spermicide.

Current field trials include:

- Corn engineered with human genes (Dow)
- Sugar cane engineered with human genes (Hawaii Agriculture Research Center)
- Corn engineered with jellyfish genes (Stanford University)
- Tobacco engineered with lettuce genes (University of Hawaii)
- Rice engineered with human genes (Applied Phytologics)
- Corn engineered with hepatitis virus genes (Prodigene)

"We all walk in the dark and each of us must learn to turn on his or her own light" - Earl Nightingale

It's no wonder GMOs are sometimes referred to as "Franken Foods." And we are left to deal with the consequences! What can we do if I may ask? We must become educated in telling the difference in food which is no longer nutritious. I am suggesting that everyone have this foundational package at their home:

- Supplemental plant-based **Digestive Enzymes** with every meal.
- Supplemental plant-based **Protease Enzymes** between meals for immune balance and clearing the system of unrecognized proteins, biofilm, or fibrin.
- Supplemental **Probiotics** taken before bed to recapture our healthy gut microorganisms and rid the system of opportunistic bacteria.

Everyone should take these. Babies to adults can take these supplements without problems as long as they do not contain fillers or additives. You will notice I specified plant-based sources, as pregnant women and babies cannot take animal enzymes (pancreatin) because of the additives necessary to protect them from the stomach. Gluten sensitive people may need a product that is formulated for their unique needs.

If you are among those whose brain chemistry, taste buds, and hormones have been taken over by the food industry (up to seventy percent of us, including forty percent of children), then it is time to stop blaming yourself and consider your own food rehab or a sugar detox. It is time for all of us to take back our health and demand that our children be protected from addictive substances in our schools and from the insidious marketing practices directed at them from the food industry.

DO YOU CRAVE SUGAR?

It is bad enough that we have genetically modified organisms in our food that our bodies do not recognize, but consider the sugars added for better taste. They mean added toxicity at our cells, which spells disease. "Crave" means to long for, yearn for, hunger for, thirst for, set one's heart on, be bent on, desire, want, wish for, sigh for, pine for, lust after, covet, etc.

So I will ask the question again — do you crave sugar? Most of us have felt the urge or unstoppable craving to look for something sweet when we are losing energy, as we typically do mid-afternoon. What is it we look for to give us a pick-up? Have you ever made a decision to allow no sweets in the house and then tear the house apart looking for something, anything sweet to devour? Why do you fall victim to that uncontrollable hunger for sweets even though you know it will make you fat or sick?

This craving or absolute need for sweets is now being proven as a powerful hardwired brain response over which we feel we have little control. At a restaurant, many times you find yourself facing a basket of bread that you want to tear into and consume all of before the entrée is served. How many times have we asked for another basket be brought to the table even before our appetizer is served?

SAD (STANDARD AMERICAN DIET)

Debate has raged recently over whether junk food, the hyper-processed, hyper-palatable food that has become our SAD (Standard American Diet) is addictive in the same way that heroin or cocaine is addictive. Foods that raise blood sugar even more than table sugar such as white flour, white potatoes, and refined starch

have what is called a high glycemic index. A new study published in the American Journal of Clinical Nutrition suggests that, in fact, higher sugar, higher glycemic foods can be addictive.

David Ludwig, author of *Ending the Food Fight*, and his colleagues at Harvard in a very sophisticated study showed that foods with more sugar trigger a special region in the brain called the *nucleus accumbens* which is known as the area of our brain for reward, pleasure, reinforcement learning, addiction, aggression, fear, and impulsivity. It is known for addictions such as gambling or drug abuse. Their theory is strong, since it appears part of the reason almost seventy percent of Americans are overweight and one in two Americans has Type Two diabetes may not be gluttony, lack of willpower, or absence of personal responsibility, but plain old garden variety biological addiction.

PLEASURE AND REINFORCEMENT

Many previous studies have shown how this region of brain, the pleasure center, lights up in response to emotionally arousing pictures, sexual images, even images of eating sugary, processed, or junk food. But this new study actually took on the hard job of proving the biology of sugar addiction. The researchers did a randomized, blinded, crossover study using the most rigorous research design to ward off any criticism. They took twelve overweight or obese men between the ages of eighteen and thirty-five and gave each a low sugar or low glycemic index (thirty-seven percent) milkshake, and then, 4 hours later, they measured the activity of the brain region (*nucleus accumbens*) that controls addiction. They also measured blood sugar and hunger.

Then, days later they had them back for another milkshake. But this time they switched the milkshakes. They were designed to taste exactly the same and be exactly the same in every way except in how much and how quickly it spiked blood sugar. The second milkshake was designed to be high in sugar with a high glycemic index (eighty-four percent). The shakes had exactly the same amount of calories, protein, fat, and carbohydrates. The participants did not know which milkshake they were getting, and their mouth could not tell the difference, but their brains could.

Each participant received a brain scan and blood tests for glucose and insulin after each version of the milkshake. They were their own control group. Without exception, they all had the same response. The high sugar or glycemic index milkshake caused a spike in blood sugar and insulin and an increase in reported hunger and cravings 4 hours after the shake. Remember, they had exactly the same calories, sweetness, texture, and macronutrient content. But the breakthrough

finding was this — when the high-glycemic shake was consumed, the *nucleus accumbens* lit up like a Christmas tree. This pattern occurred in every single participant and was statistically significant.

This study showed two things:

- First, the body responds quite differently to different calories, even if the protein, fat, and carbs (and taste) are exactly the same.
- Second, foods that spike blood sugar are biologically addictive.

This game-changing study must force a shift in the conversation about obesity in America. There are 600,000 processed foods in the marketplace, eighty percent of which have added hidden sugar. The average American consumes 22 teaspoons of mostly hidden sugar, and the average teenage boy has 34 teaspoons a day (more than two 20-ounce sodas). One serving of Prego® tomato sauce has more sugar than a serving of Oreo® cookies. Sweetened yogurts can have more sugar than a can of soda. Read the carbohydrate count of foods and then the actual sugar count. You may see that the sugar may be switched with synthetic sugars and you might think this is best. The synthetic sugar has a taste that is anywhere from 400 to 600 times sweeter. Their use is more of a disease-forming problem, or at least as much as sugar.

Sugar is the core ingredient used by the food industry to make bad ingredients (processed flour and chemicals) taste good. Our consumption has increased from when sugar cane was introduced years ago by the Jesuit missionaries in the late 1700s to a producer of sugar here in the United States, based in Florida, which produces 700,000 tons of raw sugar annually and have the newest cane sugar refinery in the US. We went from sucking on a sugar cane to the average American consuming 140 pounds of sugar a year and also consuming 133 pounds of white or wheat flour, which raises blood sugar more than table sugar (sucrose).

No one wants to be fat or become a drug addict. No one wants their life destroyed by disability and illness. We have policies and laws that protect people from alcohol, tobacco, and illegal drugs of abuse. Sugar and flour (and too much starchy white potatoes and white rice) or products containing them appear to be no different. In fact, some animal studies show that sugar is eight times as addictive as cocaine.

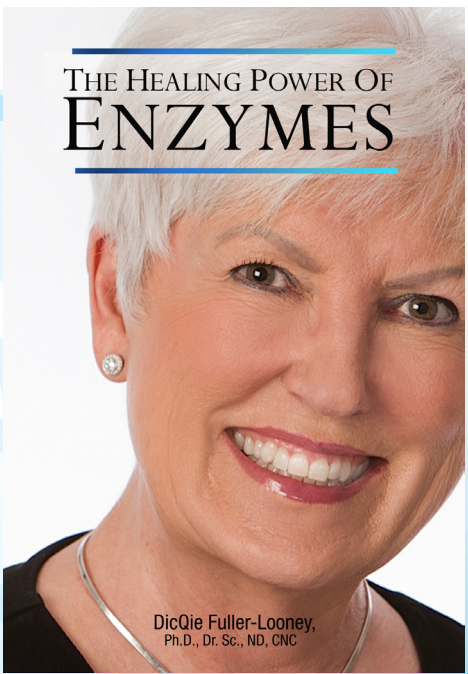
It is time to stop blaming the uneducated fat person. Can we really blame our children if we freely give them drugs of abuse in the school lunch line or as after-school snacks? Can we really blame the average overweight person? The nutritional landscape in America is a food carnival.

Kelly Brownell from Yale's Rudd Center for Food Policy and Obesity has created a validated food questionnaire to help you determine if you are a food addict. He recently also published a textbook, *Food and Addiction*, that lays out the science of how our hyper-processed, hyper-palatable, hyper-sweet industrial food has hijacked our brain chemistry and biology.

Here are five clues that you may be addicted to sugar, flour, and processed food. Ask yourself if you can answer yes to each of these questions:

- Do you consume certain foods even if you are not hungry because of cravings?
- Do you worry about cutting down on certain foods?
- Do you feel sluggish or fatigued from overeating?
- Do you have health or social problems (affecting school or work) because of food issues and yet keep eating the way you do despite negative consequences?
- Do you need more and more of the foods you crave to experience any pleasure or reduce negative emotions?

Newly Revised with 6 Additional Chapters!



Dr. DicQie Fuller-Looney has enjoyed and been blessed by her 30-plus years as a clinician, educator, researcher, and author. She has earned two Ph.Ds, one in Health Science and the other in Dietetic Nutrition, and also holds a degree as Naturopathic doctor – Heilpraktiker from Germany Kneipp Heilpraktiker Akademie. Her passion in the last 35 years has been in the realm of Enzyme Therapy along with Biochemical Individualism and their use in bringing balance to the body whether involving our health, thoughts, or harmful beliefs.

"How exciting! A Must Read For Everyone!!! What a great educational tool for those practitioners stuck on the simplicity of our wonderful enzymes" - Rose Jacobson, CT

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