

Diabetes and Carbohydrate Addiction

by Charles Gant, MD, Ph.D.

Conventional medical treatment of diabetes provides us with a perfect example of how our "health-care" system is often more concerned with managing disease than actually healing a person's unbalanced metabolism. As I have noted elsewhere, diabetes is simply another label that says very little about what is going on in a person's physiology or what is causing one's metabolic problems. The Roman Aretacus (AD 70) coined the term diabetes, meaning "to flow through," after noting excessive thirst and urination in some patients. In 1675, London physician Thomas Willis noticed the sweet taste of urine produced by diabetic patients. He added the term "mellitus," meaning "honey-like." Two completely different types of diabetes mellitus—called "Type I" and "Type II"—are often lumped together as if they were related to each other. (A third type of diabetes, called "diabetes insipidus," is caused by a completely different metabolic problem than either Type I or Type II.)

Labeling patients with terms like "diabetes," instead of educating them about metabolic processes, only confuses and scares them, and reactivates all our cultural mythologies surrounding "disease." When people are confused and scared (everyone knows somebody who's died or been sick with diabetes), they're more likely to submit to treatments that are potentially worse than the illness. When people are kept in the dark about their metabolism, believing they have an incurable "disease," they are no longer free to choose to alter their physiologies. Instead, they must depend on professional specialists to "treat the disease."

10-20 Million Americans "Have Diabetes"

Let's demythologize diabetes. First, the diagnosis is simply a label that you need not fear. Second, diabetes is a general term for various metabolic imbalances that we can often correct. Third, if you can cut through all the

misinformation surrounding this one "disease," you'll be more able to come to terms with any disease in a more fundamentally scientific and rational way.

Diabetes treatment is big business. In the U.S. an estimated ten to twenty million people "have diabetes." "Diabetes" causes 50% of amputations, 25% of kidney failures, and more blindness than any other "disease" in our country. The economic impact of "diabetes" is estimated at \$20 billion annually. You can be certain that a good chunk of "healthcare" money (1/7 of the GNP) goes to diagnosing and treating this one problem. That's quite an impact for a well-defined and usually reversible, certainly preventable, imbalanced physiological process.

There are two kinds of "diabetes mellitus." Type I is called "juvenile," and Type II is called "adult onset." The confusion

inherent in the conventional classification of disease is especially appropriate to note here, because these totally different conditions are often lumped together. Very different metabolic imbalances underlie Type I and Type II diabetes.

Type I (Juvenile) Diabetes

The metabolic problems causing Type I diabetes stem from an insufficient secretion of the hormone insulin by an injured pancreas. Usually an autoimmune process causes such an injury. The pancreas normally secretes insulin when the blood sugar levels rise (after eating carbohydrates) in order to get the sugar out of the bloodstream and into cells. The cells either burn sugar immediately for energy or store it as fat or glycogen (starch).

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If you understand one autoimmune process, you basically understand all 300-400 of them. Type I diabetes is no different. When a toxic overload (usually from the GI tract) challenges the immune system excessively, it goes into overdrive. It may even begin to attack normal tissues. In this case, the immune system becomes so aggressive that it mistakenly attacks the Islets of Langerhans cells in the pancreas, which then do not secrete enough insulin to get sugar into the cells, and blood glucose (sugar) levels start to rise. Insulin controls other metabolic processes too, so many systems can be compromised. Insulin imbalances are dangerous.

Type II (Adult-onset) Diabetes

Type II (adult-onset) diabetes is essentially the opposite of Type I. The metabolic imbalance here is insulin excess, not shortage. Excess carbohydrates in the diet cause this problem. The average American eats 762 doughnuts, 82 quarts of ice cream, and 120

pounds of sugar a year. This extreme load of carbohydrate puts a severe stress on the body. This has recently been worsened by the belief that a high carbohydrate diet is good for you.

When the pancreas “senses” that glucose levels are rising in the bloodstream, it secretes insulin. This circulates in the body and lands on insulin receptors on the cells. Insulin opens up the transport gates on the cell membrane to send the sugar into the cell. Cells can only burn a certain amount of sugar—let’s say, for discussion purposes, about a quarter-pound each day. What happens to the other two doughnuts-worth of sugar per day in the average diet? Since sugar must be cleared from the bloodstream, it’s often stored as excess fat.

When Force-fed Cells Rebel: Insulin Resistance

Cells force-fed on carbohydrates eventually get overstuffed with carbohydrates and fat, and they start to rebel. They begin to shut down their insulin receptors so that the insulin that stimulates them won’t work as well. This is the way that cells protect themselves. In the meantime, the pancreas senses that its insulin is not doing the job as well, so it secretes more. This forces the cells to pack in a little more sugar. They respond by shutting down their insulin receptors even more tightly. This cycle is like a parent-child game. The pancreas takes the parental or demanding role, and the cells take the role of oppositional child. If you’ve cared for oppositional children, you know the kids generally win the control game. This is also true when it comes to metabolizing excessive carbohydrates. The cells win the argument. Eventually, regardless of how much insulin the pancreas secretes, the cells refuse to cooperate.

This condition is called hyperinsulinism or insulin resistance. If we were going to call this situation a disease, these would be much better names, because they tell us what the real problem is. But even if the label is more descriptive, I still don’t recommend calling it a disease. The diagnosing game misleads people

into believing they are trapped by a concrete entity. I'd prefer they understood they are involved in a biochemical process that they can change if they are empowered with knowledge.

When the increasingly insulin-resistant cells win, the impotent pancreas can no longer get the sugar out of the bloodstream. Blood glucose levels begin to go up, causing Type II (adult-onset) diabetes mellitus. In Type I diabetes, blood sugars also rise, not because of insulin resistance, but because of *hypoinsulinism*. The pancreas is damaged by an autoimmune process in Type I diabetes and can not make enough insulin to get the sugar out of the bloodstream into the cells.

Why There is Confusion

You can now see why Type I and Type II diabetes get lumped together. Both types of diabetes look similar on the surface. Elevated blood sugar levels cause classic symptoms such as excessive thirst and urination. If you were primarily interested in managing symptoms instead of understanding the underlying cause and teaching people to correct their metabolism, you might treat Type I and Type II essentially the same. The superficial problem looks like too much blood sugar, so the standard intervention is the same for both—administer a hypoglycemic drug or insulin to get the excess sugar out of the bloodstream and into the cells.

When people with the more common, adult-onset diabetes mellitus consent to this medication, they are forcing their cells to cram in yet more carbohydrates. This is like taking an oppositional child to a probation officer, who then forces the child to obey. Analogously, the physician is the probation officer, prescribing a drug to override the objections of carbohydrate-stuffed cells. Type I juvenile diabetics also take insulin to lower their blood sugar levels—in this case, using insulin is quite appropriate because the pancreas is making too little insulin, not too much.

Why Don't We Act?

If we know the underlying biochemical imbalances, why doesn't the general public have this information? Why don't we treat Type I diabetics for an autoimmune problem and restrict carbohydrates for Type II diabetics? Why do doctors tell patients that Type II diabetes is incurable? Why do people hear that carbohydrates, which are literally poisonous to many, are good for them? What are the economic consequences of managing disease versus reversing it? My patients and I ask questions like this every day.

Let's Start at the Start — with Food

We can unravel this problem where it begins—with food. Type I diabetes is a much more serious metabolic imbalance—autoimmune problems are by their nature serious. If the pancreas is injured badly enough, it may not recover to make insulin again. But that possibility shouldn't stop an enlightened medical system from at least trying to reverse the damage.

During their first six months, human infants *normally* have “leaky gut syndrome.” This means the GI tract has microscopic pores in it, allowing fairly large proteins to pass intact into the bloodstream. This leakage allows breast milk antibodies to pass into the baby's bloodstream, conferring some passive immunity. Without these protective antibodies, the baby's undeveloped, unassisted immune system would be more vulnerable to diseases.

If the infant gets table foods instead of breast milk, foreign proteins pass into its blood. These proteins are much more likely to stimulate an immune response than the mother's proteins. One of the most allergenic proteins is in cow's milk (casein). Studies have implicated casein in the etiology of Type I diabetes. Actually, probably many food proteins cause the same condition. Many factors, including genetics, determine each infant's unique immune reactions. Food allergy testing can determine which foods to eliminate. If there were more interest in preventing

diabetes, food allergy testing would be done on all non-breast-fed babies.

Type II diabetes is much easier to deal with. A massive carbohydrate load is the problem, so the answer is simple—stop eating carbohydrates. It’s like that old joke about the guy who tells his doctor that it hurts when he laughs, so the doctor advises him not to laugh. Let me give you some facts. The human diet contains essential nutrients. This means we must consume certain classes of nutrients or risk disease and death. Carbohydrates aren’t among them, regardless of what you hear from experts, the media, or government. There are essential amino acids, essential fatty acids, essential vitamins, essential minerals and essentials like fiber, water and oxygen. At certain periods in history, different cultures have incorporated more carbohydrates into their diets, leading to some ethnic variations in carbohydrate sensitivities and tolerance. But there’s no such thing as an “essential carbohydrate.” Period.

Read Your History

If you believe the evidence that humans—or human-like creatures—have walked the earth for at least two million years, then it’s easy to see why carbohydrates are irrelevant. Our ancestors only consumed carbohydrates during the growing season, for perhaps several months a year. Most of the time they subsisted on fish, wild game, roots, and insects, eating no carbohydrates at all. For much of the year, there were few carbohydrates to eat. Humans are *designed* to consume a diet that is high-protein, high-fiber, moderate-fat (especially essential fats), low or zero-carbohydrate. Anthropologists largely concur about this profile. But we usually don’t hear such information above the low-fat, high-carbohydrate media hype bombarding us daily.

Our ancestors’ insulin levels increased during the summer to handle the sugar load from plentiful carbohydrates. That drove the storage of body fat, which came in handy during the next long winter. Those of us cursed

with “famine genes” (the propensity to generate high insulin levels and store body fat easily) tend to get fat in a culture that is on a perpetual summertime diet cycle. I’m not making excuses for obesity. I’m just saying that if the Western world suffered famine, people like those in my family line will do better than most, because my relatives have diabetic genes and its consequent obesity.

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About 7,000 years ago, humans developed agriculture. Grain storage meant that people could eat carbohydrates year around. Mummies dissected from periods before and after this pivotal era look like different species. With agriculture, chronic diseases such as cancer and atherosclerosis began to appear, and lower protein diets caused major decreases in stature. Then, as if to insure humanity’s decline into poor health, we began to ferment carbohydrates 3,000 years ago and, 500 years ago, to distill the ferments into whiskey. Now we are rushing headlong into a low-fat era that will sharply escalate rates of essential fatty acid deficiency syndromes. The popular “food pyramid” stressing high carbohydrates further insures there will be no shortage of diabetics.

When insulin levels are high, blood sugar levels destabilize and people complain of hypoglycemia, sugar cravings, and “food addiction” (another nonexistent “disease”). But they’re only doing what their hyperinsulin state is telling them to. The endocrine system says, “It’s summertime, so eat as much as you can, store as much fat as possible, because you’ll need it later to deal with Jack Frost.” This is why only the endocrine consequences of food matter, not the caloric consequences. Hence,

bulimia and food addictions are completely “normal” in the sense that people with such conditions are only doing exactly what their hormones are telling them to.

Digging Out and Detoxifying

Mineral deficiencies, especially magnesium (75% of the U.S. population), chromium (90% of the U.S. population), and vanadium, all combine to complicate hyperinsulinism. These minerals are critical to insulin functioning and carbohydrate metabolism. Replenishing these minerals is the first and easiest course that a hyperinsulinemic individual can take to start climbing out of the hole she or he has unwittingly dug. The body also uses the amino acid *glutamine* to keep blood sugar levels steady. You may appreciate this effect if you have hypoglycemic symptoms or are the “nervous type.” You can be tested for metabolic imbalances, so you don’t have to guess about your unique needs. Remember, adult onset diabetes is not a fixed entity called a *disease*—it’s a *process* of carbohydrate-induced hyper-insulinism and all the metabolic abnormalities that go with it. You are always changing and adapting, and your endocrine system can learn and adapt too.

If you’re in a very deep hole and taking insulin, don’t rush into these recommendations. Start low and go slow. It took you years to let a poisoned, junk food world trash your endocrine system and it will at least take many months to clean up the mess. Study the references at the end of this paper and work out a strategy with a holistic practitioner.

Low blood sugars are more acutely dangerous than high blood sugars, because you can die. Insulin must be tapered slowly while you correct nutritional deficiencies and begin eliminating carbohydrates from your life. You must work with the prescribing doctor here, or potentially risk your life. This will mean that he or she adjusts your dosage downward as you handle your carbohydrate addiction. If a doctor insists that your condition is “incurable,” find one who will work with you.

Remember, carbohydrates are not essential for anyone who is not on insulin or another medication that has been designed to stuff your cells full of more sugar and fat. Eventually you can get off them completely. In the final analysis, carbohydrates consumed at the levels recommended by many experts are poisonous for those with diabetic “famine” genes. Except for the occasional delectable dessert or indulgence, carbohydrates should not be eaten regularly. Carbohydrates consumed at the current average levels are drugs—one of the main drugs of a drug-addicted Western world. Diabetes is just the tip of the iceberg, the end stage of a metabolic imbalance that’s been going on for years.

A word about fats. Studies indicate that fats themselves do not hurt you at all, even saturated ones, *if you simultaneously avoid the carbohydrates usually eaten with them. But now, for the first time in human history, foods with a high fat content can be dangerous for another reason—because of the petrochemicals and insecticides often dissolved in them. Try not to consume foods likely to be laced with these and other cancer-causing chemicals, such as meats from animals fed hormones and antibiotics.*

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It takes about three days of carbohydrate restriction to clear the candy coating on your cells and arteries and relieve yourself of the burden of your sugar stores. During this detoxification period, some people can have some serious symptoms. This happens to most addicts coming off of drugs. Pick a weekend or a relaxing holiday to do this, so that you don’t make enemies in the workplace. Seeking assistance from a holistic practitioner

or a conventional physician who has “seen the light” is helpful and safer.

Conclusion

As data accumulate about the metabolic processes underlying diabetes and carbohydrate addiction, it’s obvious that everyone’s health is in jeopardy. This is especially true for those with certain genetic risk factors or members of some ethnic and cultural groups. There is also research underway focusing on links between metabolism, blood type, and body type that may prove illuminating.

For most people, Type II adult-onset diabetes mellitus is potentially reversible. Patients should be educated about their unique and correctable metabolic processes. It is surely worth exploring as well whether Type I “juvenile diabetes” can also be reversed, or at least improved by the newer, alternative approaches to autoimmune processes. In general, we should classify carbohydrates as addictive substances, and we should be educating the public about their hazards.

Suggested Reading:

Robert Atkins, MD, *New Diet Revolution*

Michael Eades, MD and Mary Dan Eades, MD, *Protein Power: The Carbohydrate Addict’s Diet*

Barry Sears, *The Zone* and *Mastering the Zone*

M. Shils, *Modern Nutrition in Health and Disease*

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Dr. Gant received his BS in chemistry from Hampden-Sydney College, his MD from the University of Virginia Medical School, and his Ph.D. in psychology from Columbia Pacific University. He was trained in family practice at Somerville, New Jersey’s Community Hospital and in psychiatry at Upstate Medical Center in Syracuse. He has been a psychiatric consultant at several hospitals and clinics in the Central New York area. He has done most of his professional work in addictions treatment, as Medical Director at the Tully Hill Drug and Alcohol Rehabilitation Center, as Medical Consultant at Syracuse Behavioral Healthcare, and as a private practitioner. He has devised nutritional and neuronutrient treatments for nicotine, alcohol and drug abuse problems. These protocols are currently being duplicated around the country and promise to improve treatment outcomes severalfold over current response rates.

Dr. Gant has lectured at the Syracuse University College of Law, and been affiliated with AAPAA (American Academy of Psychiatrists in Alcoholism and the Addictions) and ASAM (American Society of Addiction Medicine). In lecturing extensively on nutritional and molecular medicine, he strongly emphasizes that nutritional medicine can prevent much of the disease and disability that physicians must treat, as well as be the economic salvation of the healthcare crisis.