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THE PHYSICIAN'S CONCISE GUIDE TO:

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The Glycemic Index Myth

Excessive Carbohydrate Consumption—Not Calorie Consumption—Leads to Overweight.



Dedicated to advancing and publicizing the science and discoveries of Prof. Brian Peskin.

There is simply no one better in the 21st century at developing practical health-related solutions based on the world's leading medical and nutritional science. **"Science - Not opinion" is Brian's trademark.** When Brian is through explaining a topic it is "case closed!" When he says it, you "can take the information to the bank!"

Unlike most of his peers' recommendations, Brian's health and nutritional recommendations have stood the test of time. **Brian has never had to reverse or significantly alter any of his medical reports – reports that have tackled everything from the dangers of soy, to the wrongly popularized need for fiber in the diet, to his warning about the potential harm of supplementing with copious amounts of omega-3.** In 1995 he published the report "Fiber Fiction" and finally, eleven years later, others in research are acknowledging the silliness of recommending fiber in the diet of a human being. Brian's latest crusade is to warn of the dangers of excess omega-3 (in particular, fish oil) and how it will lead to increased cases of skin cancer. The list goes on and on...

Brian received an appointment as an Adjunct Professor at Texas Southern University in the Department of Pharmacy and Health Sciences (1998-1999). **The former president of the University said of his discoveries: "...His nutritional discoveries and practical applications through *Life-Systems Engineering* are unprecedented."** Brian earned his Bachelor of Science degree in Electrical Engineering from Massachusetts Institute of Technology (MIT) in 1979. Brian founded the field of *Life-Systems Engineering Science* in 1995. This field is defined as *The New Science of Maximizing Desired Results by Working Cooperatively with the Natural Processes of Living Systems*. To many, Brian is THE MOST TRUSTED AUTHORITY ON HEALTH AND NUTRITION IN THE WORLD.

Brian continues to be a featured guest on hundreds of radio and television shows both nationally and internationally. His sheer number of accomplishments during the last decade of the 20th century and into the 21st century are unprecedented and uniquely designate him as the #1 authority in the world of what really works and why. Forget listening to the popular press or most popular so-called health magazines. Their editors simply don't understand the complicated science that they write about - they merely "parrot" what everyone else says without independent scientific verification. Their recommendations often have no basis in reality of how the body works, based on its physiology.

Brian has dedicated his life to provide the truth - which is almost always opposite to what everyone says. Here's why Brian is the #1 man in America to listen to when it comes to your health.

The Myth of the Glycemic Index

What is a Carbohydrate?

If it isn't protein, like meat, fish, chicken, or eggs, and it isn't fat, like butter, cheese, cream or oil, then it is a carbohydrate. Carbohydrate foods are composed largely of sugars and starches. They include bread, cereal, juice, fruit, vegetables, pizza, candy, soda, ice cream, milk, corn, rice, pasta, and potatoes. Carbohydrates are everywhere!

But regardless of whether the carbohydrate is "simple" (sugar) or "complex" (starch), sweet, salty or bland, it is still glucose (sugar) in disguise. All carbohydrates derive from sugar. Fruits and many vegetables are loaded with carbohydrates, while grain foods are almost entirely carbohydrate.

There is much controversy concerning the "glycemic index" and its relationship with simple and complex sugars.¹ Followers of the GI system are on the right path to minimizing their harmful sugar levels. However, there is more to understand in fighting cancer and diabetes:

- The index has NOTHING TO DO with the AMOUNT of the particular carbohydrate eaten. You can consume a "lower" GI food, yet eat 2-3 times more of it (like popcorn) than the rating is based on! If this happens, that extra amount consumed more than compensates for the lower utilization—you have accomplished nothing.
- According to the "Index," vanilla ice cream is a 60 and a boiled potato is a 63 making the potato worse than ice cream. "Frosted flakes" (a highly sugared product) has a 55, which is lower than cornflake's 83 or Nutri-grain's 67. Potato chips rate a low 56. A "Snickers Bar" rates a low 51! Do you find something wrong with this? We do.

Professor Julie Miller Jones, Ph.D. (past holder of the 3M Endowed Chair in Science) at the College of St. Catherine in St. Paul Minnesota, has reviewed the current research and tells us of some important Index drawbacks:²

1. "...[V]alues can vary as much as five-fold, depending on the food form and how it is measured.

¹ The glycemic index (GI), developed in 1981, uses glucose as a standard of comparison with other carbohydrates as a measure of how quickly they enter the bloodstream. Glucose is given a value of 100.

² Contraindications and Challenges: A Look at the Glycemic Index by Julie Miller Jones, Ph.D.: ref: www.wheatfoods.org/pdfs/wfc_gi_white_paper.pdf.

2. “The food eaten at the previous meal can also affect the glycemic response at the current meal...

3. “The American Diabetes Association, in their recommendation of 2002, **chose not to include a recommendation regarding the use of the glycemic index** in the treatment of diabetes. They based their position on the fact that blood sugar control and glycosylated hemoglobin [HbA1C] were **not improved** in many studies where glycemic index was control. Note: HbA1C is a measure of average blood sugars. The lower, the better.

4. “...Surprisingly, the **day-to-day variation in the same subject** is often greater than variation between subjects.” (emphasis added)

Item 4 shows that *predicted* GI vs the *measured* GI can greatly vary. There is another measure termed “**insulinemic index**” (II) which we believe is a much better measure of the effect of a certain carbohydrate in raising blood sugars because this measure looks at the insulin output required to maintain constant blood sugar level. Less insulin output is always best. The quote from “Inconsistency between glycemic and insulinemic responses to regular and fermented milk products,” shows the vast difference between the GI and II:

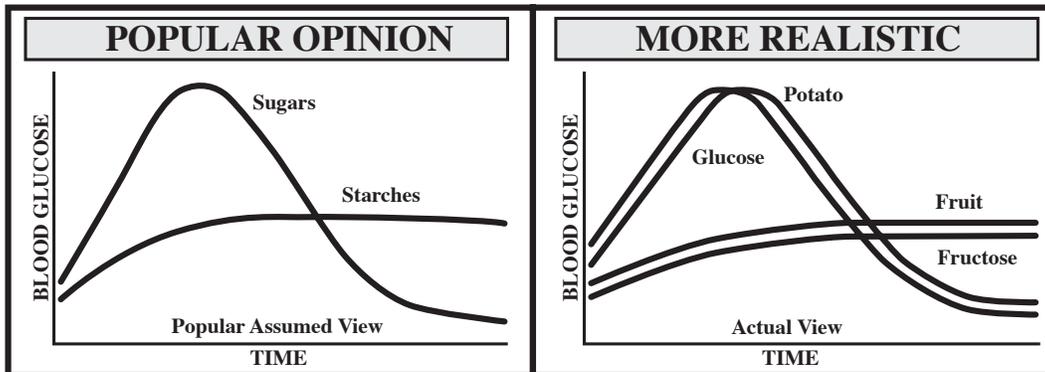
“Milk products appear insulinotropic as judged from **3-fold to 6-fold higher insulinemic indexes than expected from the corresponding glycemic indexes.**”³

The Flint et al., *British Journal of Nutrition* 2004 Jun; 91(6):979-89 publication confirmed their finding and explains more:

- “...**No association** was found **between predicted and measured GI.**
- “...There was **no association between GI and II.**
- “...In conclusion, the present results show that the **GI of mixed meals calculated by table values does not predict the measured GI** and furthermore that carbohydrates do not play the most important role for GI in mixed breakfast meals. Our prediction models show that the **GI of mixed**

3 *American Journal of Clinical Nutrition*, Vol. 74, No. 1, 96-100, July 2001.

meals is more strongly correlated either with fat and protein content, or with energy content, than with carbohydrate content alone.” (emphasis added)



In the graphs, people were given 50 grams of various carbohydrates (equivalent to approximately 10 teaspoons of sugar). As you can see, from the right chart's real-life result:

- The “low” vs. “high” GI designations both generate increase glucose levels for approximately 30 minutes—the **difference in peak concentrations of the lower GI food is just 0.15 grams/L. Note: 5 g is a teaspoon of sugar in your entire blood supply of 5 liters.**
- Low and high GI foods both increase glucose concentrations for approximately the first 30 minutes as insulin does its job to remove excess glucose. After 30 minutes both the high and low GIs elicit decreased glucose concentrations until approximately 70 minutes.
- From 70 minutes onward, the glucose concentrations of both foods remain relatively constant. However, during this time of 70 minutes – 135 minutes, **the lower GI food ends with a higher glucose level than the high GI food—the OPPOSITE of what we desire.**

Flint et al., *British Journal of Nutrition* 2004 Jun; 91(6):979-89, confirmed the above upsetting finding:

Life-Systems Engineering Science analysis: It as though the body ultimately prefers a higher GI indexed food because the lower GI food terminates with a higher sugar level, a bad outcome. **A complex carbohydrate and lower**

GI carbohydrates take just 15 minutes to start hitting the bloodstream as glucose as the chart shows. So don't be fooled. Furthermore, **regardless of GI measure, it is the same amount of sugar and you won't fool your pancreas or your bloodstream.**

The "insulin load" is the critical measure to minimize both cancer and diabetes risk. Each five grams (20 calories) of carbohydrate is approximately the equivalent of one teaspoon of sugar. Start checking the food labels. How many teaspoons of sugar are you unknowingly consuming each day? **For decades, the average American has unknowingly consumed over 60 teaspoons of disguised sugar (in the form of carbohydrates) each day, like juice, oatmeal, so-called "heart-healthy" cereals, rice, bagels, spaghetti, food bars, etc.**

The only part of a carbohydrate food that isn't sugar is its fiber content. And contrary to what practically every nutritionist you will talk to says, as you have already discovered, fiber is not food for a human being. We can't digest fiber the way a cow can—a cow needs its four stomachs to do so.

Life-Systems Engineering Science analysis: Millions of people are trying to minimize their blood sugar based on an erroneous belief of GI. **Making all carbohydrates "last on the list"** after consuming plenty of protein and natural fats this program suggests is the *real-life* approach that we recommend to staying cancer-free.

Next, we need to find the connection—and science—linking obesity and carbohydrates. Then we will discover how obesity increases your likelihood of contracting cancer.

Excessive Carbohydrate Consumption—Not Calorie Consumption—Leads to Overweight

In the face of a staggering 64% of Americans now overweight or obese,⁴ we can no longer ignore the fact that this obesity "epidemic" has been caused by a specific factor that before now has not been given the primary importance it deserves—excessive carbohydrate consumption.

⁴ "1999-2000 National Health and Nutrition Examination Survey (NHANES)," using measured heights and weights.

Carbohydrates Not Needed for Fat Burning or Increased Metabolism

Another nutritional myth is that lots of carbohydrates are required in order for fat to be “burned for energy. The medical textbook, *Stryer’s Biochemistry (4th edition)* pages 612 and 638 make it quite clear that “fat does not burn in the flame of carbohydrates.” Your body will burn fat for energy automatically IF there is no overdosing on carbohydrates.

We are told that to increase the metabolism, and burn fat, to consume lots of carbohydrates. This is incorrect too. As *Textbook of Medical Physiology* page 908 makes clear, **carbohydrates slow the metabolism** compared to consuming natural fats and proteins.

In the media there appears to be a “war” going on between the proponents of the old calorie theory of weight gain and loss and the low carbohydrate advocates, publicized most recently by the late Dr. Robert Atkins. For decades, for reasons having little to do with actual science, physicians, nutritionists and the popular press have promoted the calorie theory of weight gain. For example, in 2001, an article in the *Houston Chronicle* titled “In Dieting, It’s the Calories That Really Count,” began: “Diets work because they restrict calories.”⁵

How Many Carbohydrates Do We Need Each Day?

Lastly, how many carbohydrates do we need each day? *Nutrition for Fitness and Sport* answers this on page 87. From what the nutritional experts, the government, and physicians have told us for decades, we would expect the answer to be “lots of carbohydrates,” but it isn’t. In fact, the answer is shocking:

“However, the National Research Council has **not established an RDA for carbohydrates**, probably **because the body can adapt to a carbohydrate-free diet** and *manufacture the glucose it needs* from parts of protein and fat.” (emphasis added)

No dietary carbohydrate is physiologically required; your body makes it as needed.

⁵ “In Dieting, It’s the Calories that Really Count,” by Ellen Creager, *The Houston Chronicle* (6 February 2001).

It's Just about Calories, right? WRONG!

But there is much more to overweight than the simplistic idea that “more calories consumed than burned causes overweight.” As you already discovered, this theory was actually first disproved 110 years ago by a scientist named Adolph Fick, M.D., whose research showed that the body is not simply a furnace or “heat engine.” Hans Krebs mentions this in his book about Otto Warburg: “**Fick made it clear in 1893 that living cells cannot be heat engines...**”⁶ It is an unscientific oversimplification to convert all foods to a caloric equivalent and think that is going to dictate how much of your food is burned as energy versus how much is stored as fat.

In reality, the type of food has *everything* to do with how it is utilized by the body. **Not all foods are simply burned for energy—many go to cellular structure.** Essential nutrients, like EFAs, become an integral part of the cell structure. They contain “calories” that are not readily available as fuel for the body. To rate different foods merely by their measured calories is to ignore how the body uses those calories. Therefore, rather than foods being assigned an inappropriate “calorie-content,” we should come up with a more intelligent measure of their effect on metabolism and weight gain. We could call this the food “utilization factor.”

The Carbohydrate Obesity Connection Documented

Now we can see how obesity can set up one of the prerequisites for the development of cancer.

There is now a great deal of scientific information that clearly shows that overweight and obesity are caused by excess carbohydrate consumption. **(And you should realize that an “excess” amount of carbohydrates is a mere 4 ounces—little more than a bagel, a piece of cake, or a large glass of juice.** Nature simply didn’t design us to eat many carbohydrates.)

But while Dr. Fick’s discovery is a documented scientific fact, it is rarely presented in detail anywhere and few physicians seem aware of it. This is another example of the experts in a field forgetting the **fundamentals** of their science and using information that has been disproved. In this case, they are 110 years out of date! The admission that the calorie theory is incorrect but

⁶ *Otto Warburg*, Krebs, 5.

that researchers amazingly still don't understand why is exemplified in a study conducted at the Harvard School of Public Health and reported in the *Houston Chronicle* in October 2003 in an article titled, "Study: Low-Carb Dieters Can Eat More." The article concluded:

"...Over the course of the study, they [the low carbohydrate eaters] consumed an extra 25,000 calories. That should have added to about seven (7) pounds. *But for some reason it did not....* That strikes at one of the most revered *beliefs in nutrition*: A calorie is a calorie. It does not matter whether they come from bacon or mashed potatoes.... A lot of *assumptions* about 'a calorie is a calorie' are being challenged."⁷ (Emphasis added.)

It is astounding that these scientists are still referencing a *belief* that "a calorie is a calorie" rather than Dr. Fick's over-100-year-old proof that human bodies are not heat engines! Since when do we require any "belief" at all? Facts are all that matters. Nobel Prize winner Richard Feynman reminded us that the **real-life results** of a theory are what really counts in scientific inquiry.

You should know that **the body's production of insulin occurs almost exclusively as a response to carbohydrate consumption—not protein or fat consumption**. The more carbohydrates that are consumed, the greater the insulin release and the greater the fat storage. Insulin therefore is a fat storage hormone. Without insulin production, there is no mechanism for the body to store more fat. The fewer carbohydrates that are consumed, the less the fat storage.⁸ **Anyone who is overweight is always consuming too many of those fattening, cancer-causing carbohydrates!**

⁷ "Study: Low-Carb Dieters Can Eat More," [directed by Penelope Greene, Harvard School of Public Health], *The Houston Chronicle* (14 October 2003), p. 9A.

⁸ *Textbook of Medical Physiology*, pgs. 974, 975, 977.