



# Diabetes

## Call to Action

### Spike, Crash and Crave

A scientific consensus has emerged that blood sugar management is “key” to addressing the interlinked epidemics of obesity, diabetes and the human energy deficit. High glycemic carbohydrates drive the “spike, crash and crave” cycle that continues to fuel these epidemics. Blood sugar management (controlled glycemic response) is achieved through the selection of low GI carbohydrate-containing foods that give up their energy more slowly.

The infamous “spike, crash and crave cycle” is a metabolic process that helped our Paleolithic ancestors store fat during the times of abundance to help them get through the lean times – like a bear fattening up for the winter. Fat storage occurs when a spike in blood sugar provokes the pancreas to flood the blood stream with insulin. The crash occurs because the flood of insulin (an energy storing hormone) draws “too much” sugar out of our blood, converting much of it to fat, causing blood sugar to fall rapidly. In response, the body craves more food to raise blood sugar levels, hunting “stress” hormones are released and the cycle continues, storing more calories as fat and taxing the pancreas for more insulin. Manufacturers have unwittingly corrupted this survival mechanism and greased the slippery slope through the use of refined carbohydrates. Manufacturers predigest carbohydrates outside of the body by milling the whole grains into fine powders and syrups. While this process helps to glue fat and protein together for the development of convenient foods and snacks, these refined carbohydrates are digested by the body within two feet of the small intestine; instead of the 22 feet that nature provided, thereby elevating blood sugar prematurely. In today’s society, our ancient survival mechanism of efficiently storing energy is contributing to the over-accumulation of fat, insulin resistance and an incessant demand on the fragile insulin-making beta cells in the pancreas, which can lead to metabolic syndrome and increased risk of type 2 diabetes.

**T**he human energy deficit is a critical consumer concern across almost all demographics. New scientific insights link the source of our modern energy crises to the same survival mechanism that is fuelling the interlinked epidemics of obesity and diabetes (“Diabetesity”). Understanding this mechanism is integral to weight management, sustained energy and disease prevention.

There is no greater health concern today than Diabetesity, which places a huge burden on individual lives and threatens to bankrupt healthcare systems across the globe. A culmination of factors is compounding and accelerating the metabolic chaos that leads to obesity and diabetes. This article addresses the key drivers behind

these epidemics, the physiological mechanisms that cause them, personal strategies that you can adopt, and what manufacturers and retailers can do to prevent them.

The term Diabetesity was coined by Dr. Francine Kaufman, a former president of the American Diabetes Association, to emphasize the metabolic link and origin of obesity and type 2 diabetes. In her book of the same title, Dr. Kaufman explains that we still carry the “thrifty genes” that helped our Paleolithic ancestors survive the lean times using insulin (the survival hormone) to store calories as fat in times of abundance. Ironically, the metabolic process that evolved to help our Paleolithic ancestors survive is now compromising our health and driving these epidemics.

## Determining the Glycemic Impact of Food

Developed by Dr. David Jenkins at the University of Toronto, the Glycemic Index is the true scientific measure of how a “carb-containing food” impacts blood sugar beyond the traditional and oversimplified notion of “simple” or “complex” carbohydrates. While initially developed to help people with diabetes, the Glycemic Index can help consumers make better food choices. Understanding the Glycemic Index and the connection between carbohydrates and insulin is necessary in order to recognize why selecting snacks with a lower glycemic response helps to stabilize blood sugar levels, manage weight and sustain energy.

## The Need for a New Kind of Energy

The explosion of the energy market (drinks, bars, shots and supplements) is both symptomatic of the energy crises and the use of such products exacerbates its negative implications. While most meals have a relatively moderate glycemic response due to combination of fat, protein and fibre, which mitigates the glycemic response, the chronic period can be traced to the between-meal-gap when consumers are likely to grab a high GI snack or energy drink in an attempt to lift their energy level. This action is counter-productive because energy levels follow blood sugar levels, which can spike and crash after these high GI snacks. Nutrient-void, quick energy fixes provoke blood sugar and energy swings, propagating the negative implications associated with the spike, crash and crave cycle.

No wonder market researchers have identified “The Energy Deficit” as the most serious concern across most demographics. Consumers often comment, “I don’t have enough energy to get through the day” or “my blood sugar crashes between meals”. Poor blood sugar management is a likely culprit. Other contributing factors may include stress, insufficient quality sleep and depression.

Blood glucose spikes following meals contribute not only to energy crashes, fat storage and obesity but also can have direct negative impacts on our health. “Accumulating scientific evidence indicates that elevated post-meal glucose spikes are linked with a number of detri-

mental health consequences including heightened oxidative stress and inflammation, which contribute to cardiovascular disease. Controlling spikes in blood glucose can therefore have widespread health benefits, particularly for individuals with obesity and/or diabetes,” says Dr. Jonathan Little, a researcher at the University of British Columbia, who studies blood glucose control.

Filling the tank with good slow-release carbohydrates that keep blood sugar in a narrow range generates obvious benefits associated with sustained energy for the mind and body, while avoiding deleterious effects associated with “on-the-go” high GI snacks and the extraordinary use of energy boosters. According to Dr. Little, “Low GI foods can help limit the metabolic chaos caused by high blood glucose spikes. Low GI snacks, such as Solo Bar, are a sensible solution for easily incorporating low GI foods into a healthy diet.”

## Call to Action

Society needs a “call to action” that is touted by government, health professionals and the food industry. We must work together to “promote a consumer shift to consider the blood sugar impact, as well as nutritional content, when making a selection of a food or beverage.”

It would seem irrational to continue to do the same thing and expect a different result. As an industry we must reflect and ask the ethical question as to why we continue to fuel these epidemics when we have the know-how to develop foods that slow the blood sugar excursion of items we put into consumer pantries. Knowing that certain foods we develop and promote have a negative impact on consumers is a wilful, if not negligent, waiver of our responsibility and inaction amounts to an acquiescence of the status quo.

What consumers need are healthy alternative between-meal-snacks that are nutrient-dense and low GI, containing a good amount of high quality protein and fibre to help them feel satisfied longer. Increasing consumer awareness of the difference between good and bad carbohydrates will drive the growth of the market for these types of products such as SoLo GI® Bars that are clinically validated to result in a lower glycemic response than other leading snacks and bars, while still providing the great taste consumers are looking for.

## The Solution!

After 30 years in functional food research and development, I have come to the conclusion that a simple, yet fundamental shift is needed to address the interlinked epidemics of obesity, diabetes and the human energy deficit.

I developed SoLo GI® Bars as one of these healthy alternatives to lead a paradigm shift, helping consumers to live a healthier lifestyle. The bars are digested slowly — enabling a gradual release of sugar into the blood stream — providing sustained energy for on-the-go-consumers, and preventing blood sugar spikes and crashes that lead to cravings and consequential weight gain. SoLo GI® Bars have been tested by Glycemic Index Laboratories and they are also gluten-free as validated by the Canadian Celiac Association.

Understanding the impact food has on your blood sugar level is only one key to maintaining optimal health. However, it is a key that opens many doors to a longer, healthier lifestyle and a reduced strain on the health care system. Experience a Eureka moment. Connect the dots and win a prize — vitality and health! You may know that carbs are nature’s preferred source of energy (not fat or protein). You may know that insulin is a hormone that people with diabetes may not be able to produce. But if you understand the connection between carbs, blood glucose and insulin, you will learn how to manage energy, your weight and prevent disease. ●



*Saul Katz, president & CEO of New Era Nutrition Inc. a pioneer in functional food research and development*