

NUTRI-SPEC



THROUGH
SPECIFIC NUTRITION

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THE NUTRI-SPEC LETTER

Volume 18 Number 11

From:
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Dear Doctor,

It may be a matter of life and death; it is certainly a matter of ...

VIBRANT LIFE VS FEELING LIKE DEATH.

It most directly involves your NUTRI-SPEC Glucogenic/Ketogenic and Sympathetic/Parasympathetic metabolic balance systems. It is the happy result of compliance with your NUTRI-SPEC Fundamental Diet. It is achieved only by those well enough informed to scorn the low saturated fat, low cholesterol diet advocated by the common wisdom of our day. It is celebrated most fully in those who laugh at the patently false omega 6 and omega 3 fatty acid propaganda so heavily hyped by today's nutrition "authorities." What is it? We are referring to one of the greatest treasures you offer your NUTRI-SPEC patients ...

GLYCEMIC CONTROL.

Blood sugar, and blood insulin have a more immediate and more powerful impact on how we feel at a given moment than any other nutrition-related factor. Only ingestion of omega 6 and omega 3 fatty acids and their subsequent oxidation or conversion into prostaglandins can rival loss of glyceemic control as a mechanism by which we ...

FEEL REALLY ROTTEN, RIGHT NOW.

[In other words, if you feel suddenly yucky --- look to your last two, or maybe three meals. You will likely find that you either poisoned yourself with PUFAs, or, that one or more of those meals violated the rules of glyceemic control.]

In response to any meal, there are seven factors that determine an individual's ability to maintain glycemic control:

1. The metabolic imbalances the person has.
2. The relative proportions of protein, carbohydrate, and fat in the meal.
3. The amount of fructose in the meal.
4. The glycemic index of the carbs in the meal.
5. The amount of glucagon produced in response to the meal.
6. The amount of insulin produced in response to the meal.
7. The sensitivity to the insulin produced.

Number 1 in the above list, consideration of each individual's metabolic imbalances, is of primary importance to you, the NUTRI-SPEC practitioner. Using objective testing procedures to discover and correct each of your patient's metabolic imbalances is what sets you apart from all other practitioners of clinical nutrition. You are special in understanding that your NUTRI-SPEC key concept of biological individuality is what determines ...

WHO WILL BECOME DIABETIC, WHEN, AND HOW.

You are special because your metabolic testing procedures give you the power to apply that key concept of biological individuality, so that you understand ...

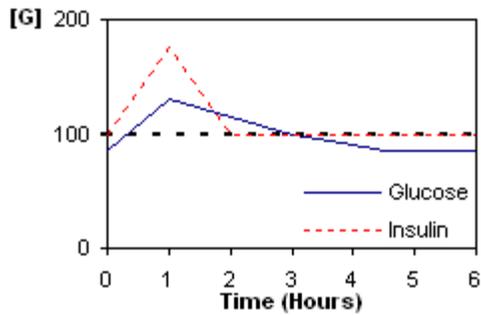
WHO WILL BECOME HYPOGLYCEMIC, WHEN, AND HOW.

It is most fundamentally essential that you understand how Type I diabetes, Type II diabetes, and hypoglycemia fit into your NUTRI-SPEC metabolic balance paradigm. The various types of breakdown in glycemic control generally follow these patterns:

- Type I diabetes = Sympathetic Imbalance
- Type II diabetes = Ketogenic Imbalance
- Reactive, compensated hypoglycemia = Glucogenic Imbalance
- Uncompensated hypoglycemia = Parasympathetic Imbalance

Of course, the causes and the effects of poor glycemic control are modified in any individual by the presence of Electrolyte, Anaerobic/Dysaerobic, or Acid/Alkaline Imbalances.

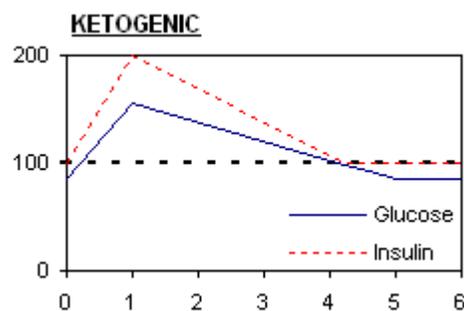
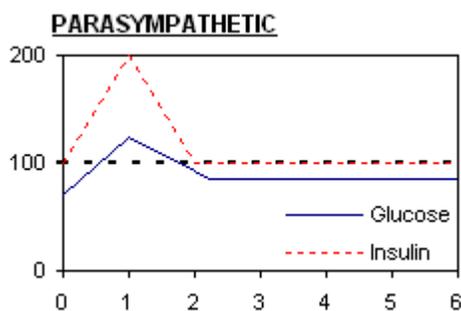
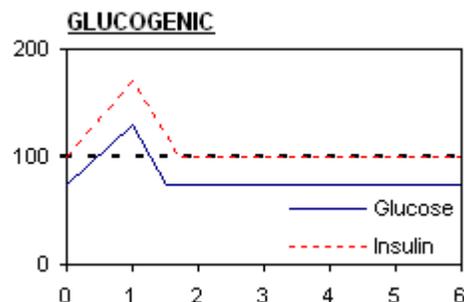
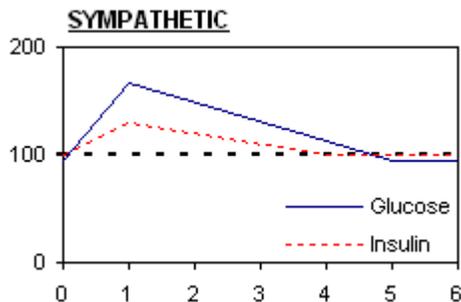
In last month's Letter, we introduced you to the idea of the glucose/insulin tolerance test (GITT). Below is a graph of normal glucose-insulin curves, showing the response of a fasting person to a meal that is in accord with the NUTRI-SPEC Fundamental Diet.



You see fasting glucose around 85, that increases to about 130 in the first hour after the meal. From that peak of 130, the glucose drops over the next 2 hours to below 100, then more gradually back to the fasting level of 85. Meanwhile, the production of insulin is stimulated very rapidly as the blood sugar

begins to rise immediately after the meal. As soon as the blood sugar begins to drop from its peak of 130, the insulin level drops even faster than does the blood sugar level, returning to the normal fasting level in less than 2 hours. (Remember, we are not showing a GITT curve in response to a test that involves ingestion of pure glucose. This is the normal glucose and insulin curve in response to a healthy meal with proper proportions of protein, fat, and carbohydrate.)

Below are glucose-insulin curves following a properly proportioned meal for your Sympathetic, Ketogenic, Glucogenic, and Parasympathetic imbalanced patients. Note the differences in levels of glucose and insulin, as well as differences in their rates of change. All the abnormal levels and rates of change would be exaggerated when people with these imbalances eat a high carbohydrate meal.



Let us consider now the consequences of ignoring the NUTRI-SPEC Fundamental Diet with respect to the proper proportions of protein, fat, and carbohydrate. Meals that are either excessively high in carbohydrate, or, that include carbs with a particularly high glycemic index, yield an exaggerated insulin response. The elevated insulin:

- causes increased conversion of carbohydrate and protein to fat for storage
- decreases access to stored fat for energy.

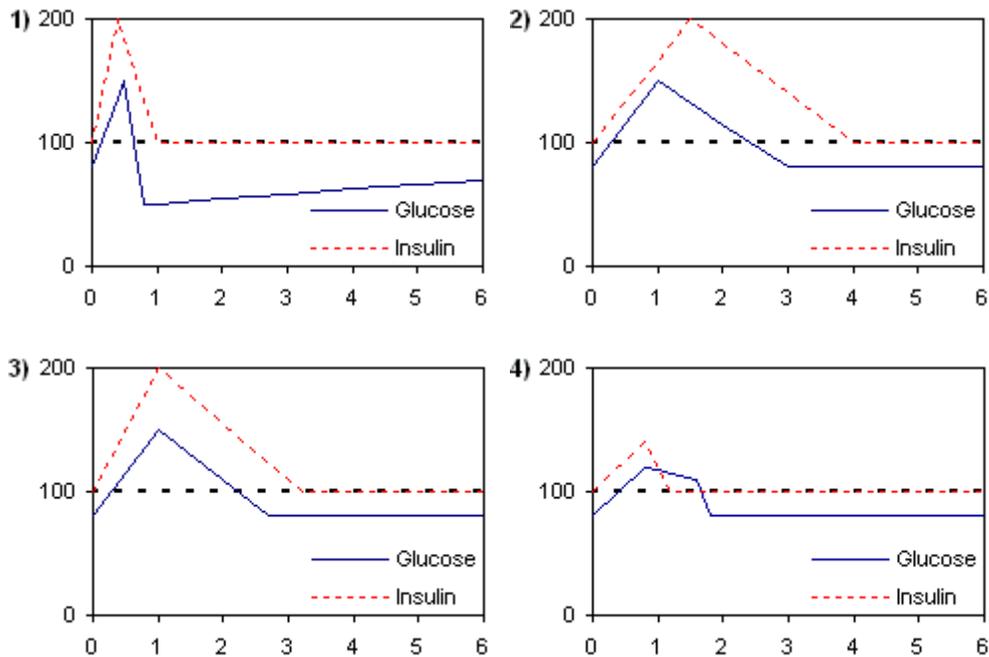
The clinical effects? --- Obesity, elevated triglycerides, and elevated cholesterol.

The high carbohydrate meals also (since they are relatively deficient in protein) cause a decreased production of glucagon. The combination of increased insulin and/or decreased glucagon causes a hypoglycemic reaction in most of us, and that reaction is exaggerated in those who tend to be glucogenic or parasympathetic. In patients who tend to be ketogenic, however, the increased insulin does not precipitate a hypoglycemic reaction but instead, because of insulin resistance, is associated with a persistently high blood glucose. These ketogenic patients are those who succumb to the metabolic syndrome --- increased abdominal fat, diabetes, elevated triglycerides, elevated blood pressure, and cardiovascular disease.

Another consequence of the low glucagon produced in response to a high carb meal, is the increased conversion of arachidonic acid into nasty prostaglandins and leukotrienes. These cause the same symptoms --- allergies, headaches, arthritis, premenstrual symptoms, etc. --- as does the ingestion of PUFAs. With low glucagon there is also a lack of stimulus to the liver to release glycogen as glucose into the bloodstream, thus contributing to hypoglycemic reactions.

So, in summary, and referring to the graphs on the previous page, there is an increased insulin effect in response to high carbohydrate meals by glucogenic and parasympathetic patients. Those who are parasympathetic have an increased insulin output. Those who are glucogenic have increased insulin sensitivity, as well as probably a decrease in glucagon production. On the other hand, in your ketogenic patients and, to a certain extent in your sympathetic patients, the excess insulin circulating after a high carbohydrate meal shows a decreased insulin effect, and prolonged blood insulin and sugar levels. Your sympathetic patients produce an insufficient quantity of insulin. Your ketogenic patients have insulin resistance, probably accompanied by increased glucagon production.

You should now be able to answer the Quiz at the end of last month's Letter with ease. Match the Graphs with John's dinner, Mary's dinner, John's breakfast, and Mary's breakfast.



Recall that John is Ketogenic and Mary is Glucogenic, and that their dinner consisted of steak, salad with Ranch Dressing, and coffee, while their breakfast included coffee, orange juice, and corn flakes with milk.

How would a ketogenic patient react to a meal of steak, salad with dressing, and coffee? Note that this is an ultra low carbohydrate meal, proportionately high in protein. Your ketogenic patient ideally gets a little glucose (in the form of starch) at every meal. This relatively high protein meal causes an increased insulin output as well as an increased glucagon output in your ketogenic patient. Poor John eats his steak and salad only to have the protein stored as fat while his blood sugar remains somewhat elevated and his high insulin remains above baseline for more than three hours. So, which of the four graphs represents John's response to his steak, salad, and coffee? --- Graph #3. As a side note, consider that John would not feel his best after such a meal. That is why, in the absence of carbohydrate, he feels the need to drink coffee with his meal. Nothing like a little caffeine to mask the insulin resistance blahs.

How does Mary, a glucogenic patient, react to her steak with Ranch dressing and coffee? Actually, steak and salad is an ideal meal for a glucogenic patient. It is properly low in carbohydrate. If she were to substitute olive oil for the Ranch dressing, she would be fine --- except --

- that she had coffee with the meal. In the absence of coffee, her insulin and glucose curves would be as close to normal as a glucogenic patient can maintain. However, understand that a glucogenic patient tends to react to falling blood sugar by putting out catecholamines to prevent the sugar from dropping too low. So, when Mary accompanies her steak and salad with a cup of coffee, the caffeine, which stimulates catecholamines, tends to delay the normal fall in glucose for an hour or so, at which point it falls off a cliff. Which of the four graphs represents Mary's response to an ideal meal ruined by caffeine? --- #4. Her over the cliff blood sugar is the reason why Mary craves the ice cream she has at bedtime.

Ketogenic John and Glucogenic Mary start off their next day with virtually nothing but sugar and starch. The coffee, orange juice, and corn flakes are even more devastating if the milk on the corn flakes is low fat. Talk about feeling like death --- wow! They would be better off eating no breakfast at all. Such a breakfast would provoke in John a huge and prolonged surge of insulin. Look at graph #2. If you were to shade the triangle formed by the insulin curve and compare it to the analogous curve in the normal graph back on page 3, you will see that John's circulating insulin is about triple that of a healthy person. Meanwhile, Mary's breakfast graph, #1, shows her glucose nosedive less than an hour after she finishes the meal. Only the caffeine's sympathetic stimulation gives her a bounce at the bottom of her glucose crash. How do you think Mary feels an hour after breakfast? Shaky? Dizzy? Anxious? Craving chocolate or another cup of coffee?

Now, multiply the John and Mary diet times 7 days weekly times 52 weeks per year. Suppose John and Mary are 33 years old and have been married and eating this way for 10 years. Mary is 20 pounds overweight, and John is 30 pounds overweight. John is already on blood pressure medication, and his doctors are watching his cholesterol very carefully (--- his triglycerides are already elevated, but his physician doesn't appreciate the significance). Mary takes Prozac, Wellbutrin, and Xanax daily, plus a handful of drugs for unrelenting menstrual and premenstrual symptoms. Imagine John and Mary at age 43, 53, 63 ... yet their diet is considered normal, and actually comparatively healthy by modern American standards. Do John and Mary need you?

Clearly, you've got a mission ---

In celebration of health,

Guy R. Schenker, D.C.