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THE NUTRI-SPEC LETTER

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From:
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Dear Doctor,

Continuing our discussion of last month's Letter on diabetes, we will emphasize this month your power to protect your patients (and yourself and your family, of course) from …

"THE DEADLY QUARTET."

This is the name given by physiologists to the metabolic syndrome which includes:

- obesity
- elevated triglycerides
- elevated blood pressure
- diabetes

The name derives from the fact that those who have these four conditions simultaneously have not much life to look forward to. Essentially, their two choices are to die much, much sooner than they would like, or, to suffer morbid symptoms for a long period of time and then die.

You know from your study of NUTRI-SPEC that half of all Americans die of cardiovascular disease. If you can do so without too much self-torment, ponder the dreary facts of death -- half of your patients, half of your friends, and half of your family are going to die of heart attacks and strokes. But -- if any of those patients, or friends, or family members have been hanging out with the deadly quartet, their chances of succumbing to cardiovascular disease are many, many times those of someone their age who has successfully avoided such company.

On a cheerier note -- you can, with NUTRI-SPEC, push all four of those nasty rascals right out of anyone's life. How? Ask yourself what

fundamental metabolic imbalance would be associated with this deadly quartet? Electrolyte Stress you say? You are correct in that nearly everyone suffering from this metabolic syndrome would, upon NUTRI-SPEC testing show an electrolyte stress imbalance. However, the electrolyte stress is secondary in this case to a more primary fundamental metabolic imbalance -- one that preceded it probably by several years at least. Which NUTRI-SPEC imbalance would that be?

Let me give you a clue. My thought is that this metabolic syndrome should be re-named the "Deadly Quintet." You see, there is a fifth shady character who is always lurking behind the scenes. And though he gets not as much recognition, he is actually the one that started the gang and put the other four up to their dastardly deeds. Who is this devil?

INSULIN RESISTANCE.

Insulin resistance is the condition in which people lose sensitivity to the hormone insulin. Typically, these people put out normal or even exaggerated quantities of insulin in reaction to dietary carbohydrate. But, the insulin in these insensitive people does not do its job. Instead of the insulin picking up the glucose in the blood and carrying it to the cells, the cells are refractory to the hormone's action. Thus, the insulin levels in the blood remain high for many hours after a meal, all the while it takes much longer than it should for sugar to clear from the blood.

Have you figured out which NUTRI-SPEC imbalance we are dealing with here? We are talking about insufficient capacity to clear sugar from the blood and put it to metabolic use. We are talking about a metabolic imbalance that eventually leads to diabetes. Yes -- you've got it --- we are talking about a Ketogenic metabolic imbalance. Every one of your patients who shows a ketogenic tendency is a prime candidate for adult onset diabetes, plus, elevated blood pressure, elevated triglycerides and cardiovascular disease. Every one of these patients -- under your care -- can be spared what inevitably would have been a gruesome future.

If insulin resistance is the king pin of the Deadly Quintet, what created this monster in the first place? Physiologists determined decades ago that insulin resistance is associated with high blood pressure, obesity, diabetes and elevated triglycerides. However, it took years to sort out the cause and effect relationships.

Since obesity (and abdominal obesity in particular) was always a factor -- many physiologists concluded that obesity was a cause of this metabolic syndrome. This belief was reinforced by the fact that when obese patients with this metabolic syndrome lost weight the triglycerides, blood pressure, and blood sugar all improved as well. Other physiologists discovered that the insulin resistance component of this metabolic syndrome occurred to some degree in almost everyone with age. They attempted to claim, therefore, that aging was a cause of

insulin resistance and thus the rest of the quintet, and that some people simply showed this aspect of aging sooner than others.

Somewhere very early along this research path it had been discovered that the Deadly Quintet could be created in lab animals (and in people) with a diet that was high in fat and high in sugar. Countless experiments were done feeding animals and humans a high fat plus high sugar diet and observing the horrible consequences. Still, the actual sequence of cause and effect was not determined. Did you have to be already obese before a high fat plus high sugar diet would cause insulin resistance? Did you have to reach a certain physiological age before high fat plus high sugar would do its damage? Did you have to become diabetic first before the triglycerides and blood pressure would go up? Did the diabetic condition make you sensitive to a high fat and high sugar diet, or did the high fat plus high sugar diet cause the diabetes?

Fortunately, a few physiologists think analytically. A series of experiments was designed that demonstrated the exact sequence of events, and, exactly what causes what. Here is the sequence:

Step One

- High Fat + High Sugar Diet.

Step Two

- Insulin Resistance
    - Decreased Glucose Transport
    - Elevated Serum Insulin

Step Three

- Elevated Serum Triglycerides
- Increased Size of Abdominal Fat Cells

Step Four

- Elevated Blood Pressure
- Increased Clotting Tendency of Blood
- (Serum Cholesterol Normal to Somewhat Elevated (but never nearly as elevated as Triglycerides))

Step Five

- Obesity

Step Six

- Type II Diabetes Mellitus

In other words, it is **diet** that pushes over the first domino that leads to crashing health. This discovery is important. It shows that doctors who try to intervene therapeutically in this metabolic syndrome are going to have very limited success unless they address the primary issue -- the garbage their patients have been cramming in their mouths for years and years and years.

The cardiovascular disease from which this person will ultimately expire is not caused by obesity per se; it is not primarily caused by diabetes; it is not caused by aging; and it is not caused primarily by elevated triglycerides. It is the insulin resistance that always happens first; none of the rest can happen unless preceded by insulin resistance. Furthermore, insulin resistance has one and only one cause …

THE HIGH FAT PLUS HIGH SUGAR DIET.

Predictably, this important information is slow to have an impact on the medical establishment. Patients with high triglycerides are treated with medications to pull the blood fats down. People with high blood pressure are treated with an assortment of anti-hypertensive drugs; people who are obese are given a low calorie diet; and people with diabetes are given drugs to control their sugar (and often are given insulin (horrors!) when their insulin levels are already sky high). (Insulin is itself a very damaging hormone by mechanisms other than those at work in the insulin resistance syndrome.) Not nearly enough emphasis is put on the fact that a rotten diet is the ultimate cause, and that correcting the diet has to be part of the cure.

If you happened to have your brain plugged in as you read these last few pages, there is an obvious question that popped into your mind --- a question that is so obvious that you must be wondering (as I did for years) why so few physiologists had enough analytical thinking capacity to ask the same question. If a high fat plus high sugar diet sets off this whole chain reaction of insulin resistance with all its ramifications, exactly what is it about this diet that causes problems? Is it the fat? Is it the sugar? Or is it that the fat and sugar have to be combined?

As it turns out, these questions and more have been answered conclusively. And while these important issues have been resolved in the scientific literature, the medical establishment has reacted to the truth with a yawn. After all, why bother to get excited about the truth, why bother to get excited about cause and effect, why bother to get excited about prevention, when one has Calan, Lipitor, and Rezulin, and an amazing arsenal of (not so wondrous) wonder drugs to play with?

Since we NUTRI-SPEC Doctors think a little differently, we are thrilled to discover the truth and find ways to use that knowledge to help our patients. Some excellent studies have been done that really zero in on the dietary culprit in this metabolic syndrome. Care to guess what it is? Is it the fat? Is it the sugar? Is it the combination of the two? One of the best studies I have seen looked at every conceivable combination of dietary factors, plus exercise, to see just what did and did not cause insulin resistance. The study looked at a high fat plus high sugar diet, and a high fat plus low sugar diet, and a low fat plus high sugar diet, and a low fat plus low sugar diet, plus each of those diets with or without supplemental dietary fiber, plus each of those diets with and without exercise.

The bottom line was that …

SUGAR, AND SUGAR ALONE
IS THE CAUSE OF INSULIN REISITANCE.

Furthermore, the effect of sugar is so powerful that no amount of exercise and no amount of dietary fiber reduces its damage in the least. No amount of fat restriction reduces its damage either. Furthermore, no quantity of fat intake would cause insulin resistance, unless that high fat diet was accompanied by high sugar intake.

So, now our case appears to be complete. We began discussing the Deadly Quartet and resolved to re-name it the Deadly Quintet because insulin resistance was the key. We then carried our analysis a step further to find that insulin resistance had one and only one cause and that was an improper diet. Now we see that the qualities constituting an improper diet can be reduced to one single factor -- the intake of sugar.

Is our case complete? Not quite. We have two more giant steps to take. First, we must ask ourselves just what is meant by “sugar?” The sugar used in all of these studies to create this vicious metabolic syndrome was sucrose. What do we know about sucrose? We know that it is a di-saccharide comprised of glucose plus fructose. We at NUTRI-SPEC also know (review Chapter 10 of your Manual) that glucose is capable of causing only a fraction of the metabolic damage (glycation, hypoglycemia, hormone imbalances, etc.) that fructose causes. What this means is that the real villain revealed by our detective work is none other than the single molecule -- fructose -- fruit sugar. (Go back to page 3 and change Step One to read, “High Sucrose (Fructose) Diet.”)

Now that we have solved the mystery of the cause and cure of one of the most virulent pathologies to afflict humankind, we must take the one final giant step and ask what does this mean clinically? As we have already stated, this entire metabolic syndrome is a perfect description of

what is going in your NUTRI-SPEC patients who test as Ketogenic. It is your ketogenic patients who tend to react to the common high fructose diet with the clinical picture we have been discussing.

Contrast this to your glucogenic types who eat equally high quantities of the devastating sugar fructose, yet who respond in an entirely different fashion. Your ketogenic patients will show elevated blood sugar while your glucogenic patients are reactive hypoglycemics. Your ketogenic patients will have high triglycerides far in excess of any tendency to high cholesterol. Your glucogenic patients will frequently have cholesterol problems that far exceed their triglyceride problems. Your ketogenic patients tend to gain weight above the waist and particularly in their abdomen, while your glucogenic patients tend to gain weight below the waist as much or more than above the waist. Your ketogenic patients have a much higher tendency to develop cardiovascular disease than your glucogenic patients do.

Another way to say this is that most Americans eat disgusting and devastating quantities of fructose. On an individual basis, if one has a ketogenic tendency, one is going to die from eating fructose; if one has a glucogenic tendency, one will live a long life during which one feels half dead from eating fructose. In either case you can, with NUTRI-SPEC, restore metabolic balance and add tremendously to the quantity and quality of each individual's life.

Sincerely,

Guy R. Schenker, D.C.

P.S.: Let's celebrate our power over the Deadly Quartet with a special this month on Oxygenic K -- 2 bottles free for every 10 you buy.

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