## Smart Sugars and Your Triglyceride Battle Getting down to the real CAUSE for FAT GAIN and what to do about it.

Smart Sugars Lesson #64

by JC Spencer

The "answer" to FAT GAIN is on magazine covers everywhere you turn. But, few know the CAUSE for fat gain! In one word, it is TRIGLYCERIDES. Triglycerides impact your body and is the CAUSE for fat gain. Sugar consuming humans have a glucose metabolism challenge and an ongoing triglyceride battle.

A high triglyceride level makes it impossible to lose weight. Triglycerides are lipids that facilitate the bidirectional transfer of blood glucose and adipose fat through the liver. Balance is the key. High triglycerides cause chaos with the bi-directional conversion of adipose fat and blood glucose.

Lipids are fatty structural molecules with the primary biological functions for storing energy, building cell membranes, and when sugar(s) are added, to make glycolipids to serve as important signaling molecules inside the cell.

Accelerated fat loss for the obese is experienced when they lower their triglycerides and keep them under 150 mg/dL which is considered normal. Over 200 is high and 500 is very high.

The raging fat battle is between good fats and bad fats, good sugars and bad sugars. Saturated fats (bad fat) along with bad sugars result in high plasma levels of triglyceride-rich lipoproteins which produce glucose intolerance leading to diabetes. Food and drink high in bad sugars cause increased triglyceride levels. These foods are converted into triglycerides and are stored in the adipose tissue, or fat cells.

Obesity is normally based on the amount of body fat in the form of adipose tissue. Adipose (meaning fat depot) fat, or tissue, is the loosely connective tissue composed of adipocytes primarily located beneath the skin, but is also found around internal organs. Adipose fat stores energy and cushions and insulates the body.

High triglycerides indicate a metabolic disorder with the lipo-glucose conversion process. In such

cases, the conversion process between blood glucose and adipose fat is impaired, resulting in a buildup of triglycerides. This can be a difficult condition to overcome and does not respond well to diet and exercise. Inability to lose fat with diet and exercise is the cause for frustration and abandonment of all hope for many.

High triglyceride levels can produce LDL (bad) cholesterol and can quickly cause cardiovascular and pancreatic problems. When LDL and total cholesterol are high, the root cause is most likely high triglycerides. More people are recognizing that statin drugs are not the answer and may cause even more serious problems.

Polyunsaturated fat, (the good fat) as Omega-3, has been shown to lower triglycerides by balancing blood sugar, reducing inflammation, and helping to regulate metabolism. Exactly how this happens is not yet clear, but we understand that Omega-3 decreases lipid synthesis (lipogenesis) and may allow the hormone leptin to work better which researchers have linked to how fast fat is burned.

Certain good sugars including Trehalose help construct quality glycolipids inside the cell while other Smart Sugars are the building blocks for glycoprotein receptor sites that coat the surface of human cells for proper communication. Cellular communication allows our bodies to know and to take action toward fulfilling the exact need of each cell.

Research confirms that Trehalose can inhibit fat cell hypertrophy (cell enlargement) and prevent metabolic syndrome which induces insulin resistance that leads to type 2 diabetes.

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