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## Research Shows: High Triglycerides CAUSE Fat Gain

### High Fructose Corn Syrup Produces High Triglycerides

**Trehalose Sugar Reduces Triglycerides - HFCS is High Risk and Table Sugar is Also Risk**

Glycoscience Lesson #35

by JC Spencer

#### Key to Fat Loss - Triglycerides

Fat loss is impossible when high triglycerides (lipids) block glucose and fat conversion to energy. The primary biological function of these fatty structural molecules is to store and transport fat. When certain sugars are added, the building blocks form glycolipids to become important signaling molecules inside the cell. These non-protein molecules make up the cell and cell membrane that help transfer glucose and fat through the liver.

Overweight people can experience serious fat loss when triglycerides are normal, kept under 150 mg/dL. Over 200 is high and 500 is very high. A healthy lifestyle of good food and proper exercise will inch you closer to your objective.

#### High triglycerides produce LDL cholesterol

LDL triggers pancreatic and cardiovascular problems. Studies evidence that statin drugs, prescribed to lower cholesterol, cause even more serious health problems.

How well the carbohydrates we consume will metabolize into glucose and ATP (adenosine triphosphate) is of paramount importance. Evidence from Rutgers University suggests that sodas sweetened with high fructose corn syrup (HFCS) may increase the risk of diabetes and obesity, particularly in children. These drinks and foods laced with HFCS are converted into triglycerides and are stored in the adipose tissue, or fat cells.

#### Raging Battle Between the Good, the Bad and the Ugly

The raging fat battle is between good fats and bad fats, good sugars and bad sugars - good and bad carbohydrates. Saturated fats (bad fat) along with bad sugars, especially HFCS, result in high plasma levels of triglyceride-rich lipoproteins which produce glucose intolerance leading to diabetes.

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. Researchers have linked leptin to the process of how fast fat is burned. Leptin is the protein circulated in the bloodstream that goes to the brain which controls how much fat to store in the cells.

#### The Sugar that Sustains Glucose Levels

One Diabetic/Trehalose study concluded that nano-particles of Trehalose result in sustained release of insulin that causes prolonged reduction of blood glucose levels in diabetic rats.

Research confirms that the sugar Trehalose can inhibit fat cell hypertrophy (cell enlargement) and prevent metabolic syndrome which induces insulin resistance which leads to type 2 diabetes. Findings further suggest Trehalose is a functional saccharide that mitigates insulin resistance resulting in a better sugar balance.

A clinical research paper from a randomized, double-blind, crossover study was designed to assess the effects of Trehalose. The study shows that Trehalose actually helps balance the insulin and glucose concentrations in obese men. This is very important for fat loss.

It is a significant finding that Trehalose elicits lower glycemic and insulinemic responses in obese men as compared with glucose alone.

#### Source and References:

Trehalose may lower triglycerides: Abstract  
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Smart Sugars and Your Triglyceride Battle by JC Spencer August 2012

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Reprint: Glycoscience Lesson #35  
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