



# Glycemic Solutions

CLINICAL RESEARCH

## GLYCEMIC LOAD DEFINED

Glycemic load is a function of carbohydrate intake *and* glycemic index.

Example: The glycemic index of one packet of *Sweet'N Low* or *Equal* is high (per clinical studies), but the glycemic load of one packet is low. If one packet of the sweeteners is consumed, no prominent glycemic response is evidenced. But if multiple packets are consumed, the glycemic load can be significant, triggering fat-storage and elevated blood glucose.

Glycemic load (GL) is calculated as the glycemic index multiplied by grams of carbohydrate per serving size. Glycemic Load is based on a specific quantity and carbohydrate content of a test food. GL is calculated by multiplying the weighted mean of the dietary glycemic index by the percentage of total energy from the test food. When the test food contains quantifiable carbohydrates, the Glycemic Load equals GI (%) x grams of carbohydrate per serving. One unit of GL approximates the glycemic effect of 1 gram of glucose. Typical diets contain from 60-180 GL units per day.

Insulin secretion and insulin sensitivity ( $S_I$ ) are directly involved in the pathogenesis of diabetes, so avoidance of insulin elevation is mandatory in preventing Type 2 diabetes and other diseases related to insulin-elevation. Increased dietary glycemic load results in increased glycemia and insulin, which leads to obesity, increased risk of diabetes, and increased risk of some forms of cancer. High dietary glycemic index and load have a proven association with insulin resistance-related diseases. Therefore, glycemic index and daily glycemic load should be considered in long-term control over excess body fat, and prevention of Type 2 diabetes.