GLYCEMIC LOAD
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The **glycemic load (GL)** is a ranking system for carbohydrate content in food portions based on their glycemic index (GI) and a standardized portion size of 100g. Glycemic load or GL combines both the quality and quantity of carbohydrate in one number. It is the best way to predict blood glucose values of different types and amounts of food. The formula is: GL = GI x the amount of available carbohydrate in a 100g serving / 100.

The glycemic load assesses the impact of carbohydrate consumption using the glycemic index but takes into account the amount of carbohydrate that is consumed. GL is a weighted GI value. For instance, watermelon has a high GI – but watermelon does not actually contain much carbohydrate, so the glycemic effect of eating it (and therefore its GL) is actually relatively low.

A GL greater than 20 is considered high, a GL of 11-19 is considered medium, and a GL of 10 or less is considered low. Foods that have a low GL almost always have a low GI. Foods with an intermediate or high range GL range from a very low to very high GI.

The rationale for establishing glycemic load as an important characteristic of a food is based on the fact that a larger amount of a food with certain glycemic index that contains few available carbohydrates would have the same effect on blood sugar as a smaller amount of a food that has the same glycemic index but a higher carbohydrate content. Glycemic Load is the product of the Glycemic Index and the grams of available carbohydrate in a 100g serving (GL = GI × available Carb grams). For example, white rice has a somewhat high GI, so eating 50g of white rice at one sitting would give a particular glucose curve in the blood, while 25g would give the same curve but half the height. Since the peak height is probably the most important parameter for diabetes control, multiplying the amount of carbohydrates in a food serving by the glycemic index gives an idea of how much effect an actual portion of food has on blood sugar level.

One recent study has questioned the value of using glycemic load as a basis for weight loss programs.

Glycemic load appears to be beneficial in dietary programs targeting metabolic syndrome, insulin resistance, and weight loss; Studies have shown that sustained spikes in blood sugar and insulin levels may lead to increased diabetes risk. The Shanghai Women's Health Study concluded that women whose diets had the highest glycemic index were 21 percent more likely to develop type 2 diabetes than women whose diets had the lowest glycemic index. Similar findings were reported in the Black Women's Health Study A diet program that manages the glycemic load aims to avoid sustained blood sugar spikes, and can help avoid onset of type 2 diabetes. For diabetics, glycemic load is a highly recommended tool for managing blood sugar.

Glycemic load for a single serving of a food can be calculated as the quantity (in grams) of its carbohydrate content, multiplied by its GI, and divided by 100. For example, a 100g slice serving of watermelon with a GI of 72 and a carbohydrate content of 5g (it contains a lot of water) makes the calculation 5·72/100=3.6, so the GL is 3.6. A food with a GI of 100 and a carbohydrate content of 10g has a GL of 10 (10·100/100=10), while a food with 100g carbohydrate and a GI of just 10 also has a GL of 10 (100·10/100=10).

The data on GI and GL listed in this article is from the *University of Sydney* (*Human Nutrition Unit*) GI database[1]