

MEASUREMENT OF preB®'S GLYCEMIC INDEX VALUE

What is the glycemic index?

The glycemic index is a scale for measuring the speed at which a food, once ingested, changes to sugar, is absorbed by the blood, and causes the blood sugar level to start to rise. GI values are ratios in which the time it takes for glucose to begin to raise the blood sugar is taken to be 100 and used as the divisor. For food with a low GI value, the concentration of glucose in the blood does not rise rapidly: rather, the glucose is steadily absorbed inside the body. It can thus be said, with such food, the blood sugar level does not readily rise and the insulin concentration is also low. This is also food to which fat doesn't readily adhere. Therefore, properly ingesting food with a low GI value is effective for maintaining and reducing body weight (Ebbeling et al. 2003). It is also thought to be preventively effective against chronic diseases such as diabetes (Salmeron et al. 1997 a. b.) cardiovascular disease (van Dam et al 2000: Lui et al. 2000) and certain types of cancer (Augustine et al. 2001: Francheschi et al. 2001). Other advantages of food with low GI value are that it is readily absorbed and produces a long lasting feeling of satiety. Conversely, the higher food's GI value is, the greater will be both the speed at which the blood sugar level- rises and the amount of insulin that is secreted.

Test Facility:

Glycemic Index Laboratories

36 Lombard Street, Suite 100, Toronto, Ontario Canada M5C 2X3

Test Purpose: To measure the blood sugar response and the glycemic index value for preB®

Subjects

A total of 10 people – 4 men and 6 women – were used as subjects. Their average age was 32.6. Their BMI (body mass index) was 24.1/3.6 kg/m. As for race, 7 were Caucasian, 2 were South Asian and 1 was Latin American.

Protocol

The test was a non blind, randomized, crossover test. One test was conducted per day and up to 2 tests were conducted per week, with at least 1 day's interval in between the test days. The subjects fasted 10-14 hours during the night prior to each test day. Then, on the day of the test, their body weight was measured; a sample of their fasting glucose was obtained by puncturing the fingertip; they ingested test food within 10 minutes thereafter; and blood samples were taken at 15 minutes, 30 minutes, 60 minutes, 90 minutes and 120 minutes after the commencement of ingestion.

Test Food

The test food included preB® containing 50 grams of effective carbohydrate (a general carbohydrate with a reduced amount of dietary fiber) and a glucose liquid (2.5 grams of anhydrous glucose dissolved in 400 ml of water) that was used as a control.

Results

As shown in the table below, the GI value for preB was significantly low compared to the GI value of the control (glucose liquid). According to the Brand Miller system of classification, preB® should be classified among foods with a low GI value.