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LB053

Glycemic response to the consumption of specialized oral nutritional supplement for glycemic control

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Background

A specialized Oral Nutritional Supplements (ONS) for glycemic control, with lower content and specific type of carbohydrate, high protein and fiber content, results in a reduced glycemic response after consumption. The study aimed to evaluate the impact on glycemic response of a specialized ONS for glycemic control.

Results

TO DETERMINE GI

200ml
48 g
OF DIAMAXIN

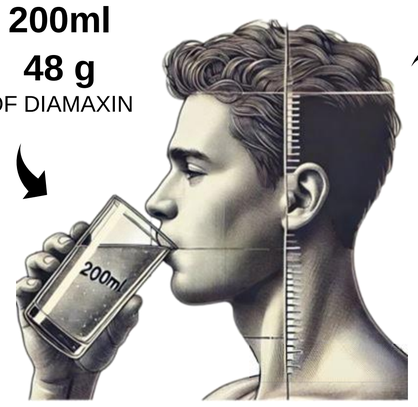
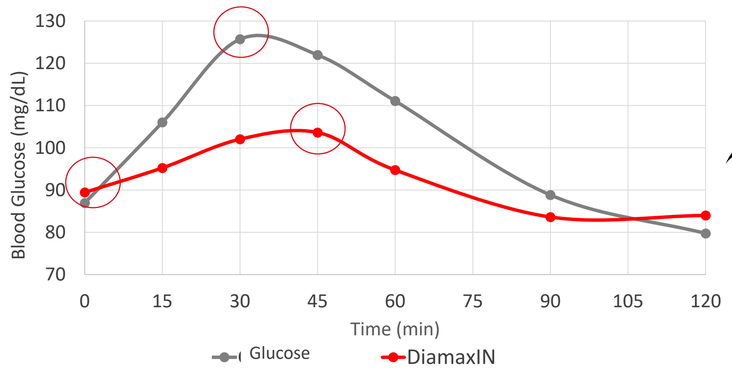


Figure 1 - Average glycemic response of volunteers (n=15) to 25 g of available carbohydrates after consumption of reference food (glucose) and ONS DiamaxIN, for 120 minutes.



- DiamaxIN showed low GI (GI=27) with significant difference compared to glucose ($p<0.0001$) and low GL (GL=7.6).
- The glycemic peak occurring at t30 for glucose (126 mg/dL) and at t45 for DiamaxIN (104 mg/dL).
- The area under the curve was smaller for DiamaxIN than for glucose (590±100 vs 2061±174 mg/dLXmin) ($p<0.0001$), exhibiting a less pronounced curve shape, without high peak, typically observed for foods with reduced glycemic response.

Method

3 weeks (1x/week):

Volunteers fasted for 10 hours

Glucose solution - 25 g of available carbohydrates

Subsequent week:

Specialized ONS (DiamaxIN - Prodiet Medical Nutrition) - 25 g of available carbohydrates.

15 healthy volunteers
Aged 21 - 49 years
Normal glucose tolerance

- Capillary blood samples were taken at:

0 (pre-consumption), 15, 30, 45, 60, 90, and 120 minutes.

- The GI was calculated using the trapezoidal rule, excluding areas below the fasting line.
- Glycemic load (GL) = [(GI (glucose=reference) X "g" of available carbohydrate per serving)] / 100.
- Student's t-test were conducted to identify differences ($p<0.05$).

Summary/ Highlights

The glycemic response to a specialized ONS for glycemic control is significantly reduced, showing low GI and GL, that results in less elevation and variation in blood glucose, leading to reduced insulin release, which may be clinically beneficial due to better glycemic control.

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