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The glycemic index of bread and biscuits is markedly reduced by the addition of a proprietary fiber mixture to the ingredients

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Abstract *Background and aim:* Low glycemic index (GI) foods are associated with improved prevention and control of metabolic and cardiovascular diseases (e.g. diabetes and myocardial infarction), even if the impact of their consumption within mixed meals is difficult to predict. Since the availability of wheat based products maintaining taste and texture of traditional ones, but with a low GI, is of relevant nutritional interest, the aim of this study was to assess the effects of a specific proprietary fiber mix, added to the wheat flour used for biscuits and bread preparation, on their GI.

Methods and results: Fifteen healthy non-diabetic volunteers ate on different days a portion equivalent to 75 g of available carbohydrates, of fiber enriched bread, traditional bread, fiber enriched biscuits and traditional biscuits, or a solution of 75 g of glucose in water. The glycemic index of each product was calculated by relating the area under their glycemic curve to that of glucose. The areas under the glycemic curves of fiber enriched bread and biscuits were lower than those obtained with the equivalent control food. Consequently, a marked reduction of their GI of 21% and 41% for bread and biscuits, respectively, was observed.

Conclusion: The fiber mix added to the flour used in the preparation of biscuits and bread markedly reduces their GI. A similar effect could be expected in other oven-baked foods produced using the same fiber supplementation.

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Introduction

Data from observational and clinical studies suggest that low glycemic index (GI) foods have a more favorable health profile than high GI foods [1–3]. Low GI food intake, in particular, is associated with an improved prevention and

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