

**April 2018**

### **Triple-improvement with Palatinose™ demonstrated in real-life situation**

A recent study by Henry et al<sup>1</sup> has compared a low glycaemic diet - that included BENEEO's functional carbohydrate Palatinose™ - with a high glycaemic diet, in a real-life scenario. The results have shown that participants who followed the low glycaemic profile diet experienced three main improvements: a lower glycaemic profile, reduced variability in blood sugar levels and improved fat burning.

Professor Christiani Jeyakumar Henry et al's study was carried out at the Clinical Nutrition Research Centre (CNRC), Singapore Institute for Clinical Sciences (SICS), Agency for Science, Technology and Research (A\*STAR) and the National University Health System, Centre for Translational Medicine. Twenty-four hour continuous blood sugar monitoring was conducted with 20 men. Participants were on two dietary treatments (low and high glycaemic) in a randomised, double blind, controlled cross-over design. In addition, the participants' energy expenditure and metabolism was measured. Overall, the trials covered a time period of 42 hours to represent a normal day-to-day situation.

The glycaemic load of the participants' meals was modulated by adding sucrose for the high glycaemic group and BENEEO's Palatinose™ (isomaltulose) for the low glycaemic group. Two metabolic parameters - glycaemic response and substrate oxidation - were measured, with the former using continuous glucose monitoring (recorded every 5 minutes for 42 hours) and the latter using whole-body calorimetry.

The study results showed that each low glycaemic modulated meal was able to move the participants' substrate oxidation - the process of generating energy within the cells from food consumed - from carbohydrate oxidation to fat oxidation, thus promoting fat burning and subsequently, over time, weight management.

Anke Sentko, Vice president Regulatory Affairs & Nutrition Communication at BENEEO comments: "The study by Henry et al really shows how Palatinose™ can contribute to a healthier diet when used as part of a low glycaemic diet. The unique combination of measuring

continuous blood glucose response, as well as energy provision, reflects a real-life scenario, rather than a snap shot situation. The benefits can be seen after each meal and the cumulative benefit is even higher thanks to a shift in metabolic set up that is carried over from one meal to the next. Given high blood sugar levels are a risk factor in the onset of type 2 diabetes mellitus, these findings demonstrate how Palatinose™ opens up opportunities for consumer products that not only promote blood sugar management, but weight management as well. In addition, an EU health claim highlighting the lower rise in blood sugar is possible when Palatinose™ (isomaltulose) is used to replace sucrose by 30%.”

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For further information on BENEEO and its ingredients, please visit: [www.beneo.com](http://www.beneo.com) and [www.beneonews.com](http://www.beneonews.com) or follow BENEEO on Twitter: @\_BENEEO or LinkedIn: [www.linkedin.com/company/beneo](http://www.linkedin.com/company/beneo)

The BENEEO-Institute is an organization which brings together BENEEO’s expertise from Nutrition Science and Legislation teams. It acts as an advisory body for customers and partners reaching from ingredient approval, physiological effects and nutritional composition to communication and labelling. The key nutritional topics of the BENEEO-Institute’s work include weight management, digestive health, bone health, physical and mental performance, the effects of a low glycaemic diet as well as dental health.

The BENEEO-Institute facilitates access to the latest scientific research and knowledge throughout all nutritional and regulatory topics related to BENEEO ingredients. It provides BENEEO customers and partners with substantiated guidance for some of the most critical questions in the food industry. BENEEO is a division of the Südzucker Group, employs 900 people and has production units in Belgium, Chile, Germany and Italy.

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<sup>i</sup> The Research was published 9 May 2017, Nutrients (Volume 9, Issue 5, pages E473: Henry, C.J., Kaur, B., Quek, R.Y.C., Camps, S.G. (2017) A Low Glycaemic Index Diet Incorporating Isomaltulose Is Associated with Lower Glycaemic Response and Variability, and Promotes Fat Oxidation in Asians. Nutrients 9, 473. DOI 10.3390/nu9050473