

Improving metabolism and health: What role can prebiotic fibres and slow-release carbohydrates play?

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There has been considerable debate about how carbohydrates affect metabolic health, particularly since the consumption of carbohydrates directly influences blood glucose and insulin levels. Carbohydrates are one of the major sources of nutrients in the human diet and come in many forms. What role can different carbohydrates play in metabolic health and which ones to look for?

Given the dramatic increase of chronic diseases which stem mostly from impaired metabolic health, it becomes more and more evident that the type and quality of carbohydrates consumed do matter. This is equally true for dietary fibres as for nutritive carbohydrates. Of great interest are prebiotic chicory root fibres in this respect. Inulin and oligofructose (FOS) are natural dietary fibres extracted from the chicory root. These fibres are selectively fermented by the gut microflora supporting the growth of beneficial bifidobacteria. Notably it is this prebiotic fermentation of chicory root fibres and the resulting short-chain fatty acids (SCFAs) which play a role in human health, by positively influencing the environment of the gut and acting as signals. Associated benefits are manifold and reach out to improvements in bowel regularity and digestive health, enhanced calcium absorption and bone health, blood glucose lowering effects, and influences on appetite regulation through gut hormones or directly in the brain via the gut brain axis.

On the side of nutritive carbohydrates, the rate of energy supply to the body can make a difference with relevance to metabolic health. Palatinose™ (isomaltulose) is a slow-release carbohydrate and provides energy in the form of glucose in a balanced and sustained way over a longer period of time. Its slower intestinal release beneficially influences the body's incretin response, leads to an overall lower blood glucose and insulin response and thereby improves the metabolic profile. The contribution of fat oxidation in energy metabolism is increased with potential long-term benefits for body weight and body composition .

This symposium will provide an overview and update on the latest science on how prebiotic chicory root fibres (inulin and oligofructose) and the slow-release carbohydrate Palatinose™ can improve metabolic health with relevance to major public health issues in Southeast Asia.