

## **Slowly digestible starch from cereal-based foods, metabolic interest at breakfast**

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Based on WHO recommendations, starch should represent the largest component of our daily energy intake (40% to 50%). During food manufacturing, heat, moisture and pressure modify dramatically the digestibility of starch in processed foods. Above the usual method to measure starch content, the rate and extent of starch digestion can be measured *in vitro* using a method developed by Englyst that classifies starch into three major fractions: rapidly digestible starch (RDS), slowly digestible starch (SDS) and resistant starch (RS) (Englyst *et al.*, 1996). Some studies compared the physiological effects of starch-based products and show that a high SDS content, in addition to high fiber and fat content, is the main contributor for a low postprandial glycemic response (Englyst *et al.*, 2003; Meynier *et al.* 2015).

We have investigated the impact of high SDS cereal products eaten at breakfast on postprandial metabolism. Based on three human trials, we investigated deeply the link between SDS, appearance rate of glucose using dual stable isotope method, and metabolic response (Nazare *et al.* 2010; Vinoy *et al.* 2013; Péronnet *et al.* 2015). High SDS cereal products induced a slower appearance rate of CHO which led to a lower postprandial glycemic and insulin responses.

In long term trials, postprandial hyperglycemia has been involved in Type 2 diabetes genesis as well as in cardiovascular events (Blaak *et al.* 2012). To conclude, the reduction of postprandial hyperglycemia may be relevant for health and metabolic disease prevention and a meaningful target for intervention through e.g. dietary factors such as diets including high SDS cereal products eaten at breakfast.