

An introductory review of resistant starch type 2 from high-amylose cereal grains and its effect on glucose and insulin homeostasis

Kathryn Harris

Bay State Milling Company, USA

Refined carbohydrates result from milling techniques that remove the outer layers of a cereal grain and grind the endosperm into a flour ingredient that is high in digestible starch and devoid of dietary fiber. The frequent use of refined grain flour in processed foods is contributing to the fiber deficient diet commonly followed in Western societies, which is believed to be associated with a number of non-communicable diseases such as Type 2 Diabetes. Technologies have been developed to produce high amylose cereal grains that have a significantly higher resistant starch type 2 and thus dietary fiber content in the endosperm of the cereal grain, which has positive implications for human health. A review of the literature was conducted to study the effects of resistant starch type 2 derived from high amylose grains on glucose and insulin response. While there are thousands of articles published on resistant starch, a total of 30 articles focused on how resistant starch type 2 from high amylose grains influenced acute and long term responses of glucose

and insulin control. Results showed that resistant starch has the ability to attenuate acute postprandial responses when replacing rapidly digestible carbohydrate sources, but there is insufficient evidence to conclude that resistant starch can improve insulin resistance and/or sensitivity.

Speaker Biography

Kathryn Harris is a Product Development and Nutrition Scientist at Bay State Milling Company, USA where she plays a key role in new product development of plant-based ingredients. With a Bachelor of Science degree in Food Science and Technology from the University of Massachusetts Amherst, USA and a Masters of Science degree in Human Nutrition and Functional Medicine from the University of Western States, USA Kathryn aspires to bridge the gaps between food science and nutrition communities. With a goal of delivering affordable food products that provide optimal nutrition to the consumer, Kathryn uses her experience from academia to read and dissect clinical nutrition research and apply that information to specific areas of food technology.

e: kfharris3093@gmail.com

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