Author's response to reviews

Title: Efficacy of dietary prebiotic supplementation on advanced glycation, insulin resistance and inflammatory biomarkers in adults with pre-diabetes: a study protocol for a double-blind placebo-controlled randomised crossover clinical trial

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Author's response to reviews: see over
Dear Editors

Re: Efficacy of dietary prebiotic supplementation on advanced glycation, insulin resistance and inflammatory biomarkers in adults with pre-diabetes: a study protocol for a double-blind placebo-controlled randomised crossover clinical trial

We wish to submit the above protocol article for consideration for publication in BMC Endocrine Disorders.

Excessive accumulation of advanced glycation endproducts (AGEs) within the body contribute to the development of diabetes and its vascular complications. AGEs are formed endogenously but also enter the body through cigarette smoking and ingestion of foods containing AGEs. The widespread consumption of high fat, heat processed foods containing large quantities of AGEs warrant simple interventions to reduce AGE-mediated damage. While there is some evidence to support the use of short-term low-AGE diets to attenuate AGE-related pathology in people with diabetes, an AGE-restricted diet is difficult to maintain for long periods of time as AGEs contribute to the favourable flavour, colour and aroma of many foods.

Dietary modulation of the human colonic microbiota using prebiotic supplements is a simple therapeutic strategy which can potentially improve the metabolic health of individuals with diabetes or those at risk of developing the condition. This article describes the first prebiotic intervention study we are aware of which examines the effect of changes in gut bacteria on the advanced glycation pathway in adults with prediabetes. Prebiotic dietary supplements capable of beneficially altering the gut microflora may prove to be an effective strategy for preventing or slowing the development of type 2 diabetes.

Thank you for considering this article and we look forward to hearing from you in the near future.

Yours sincerely

Nicole Kellow
Melinda Coughlan
Chris Reid
Gayle Savige
1) Evidence of Ethics Approval: Monash University Human Research Ethics Committee certificate of approval (attached).

2) External Funding: Nil.

3) Trial Registration: Australia and New Zealand Clinical Trials Register (ANZTR) Number: ACTRN1261300130763.

4) Recruitment of participants for this study is expected to commence: December 2013.

5) Other manuscripts produced based on this study protocol: Nil.