

The effect of gene-based personalised diet and physical activity advice on healthy eating motivation in university students.

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Background:

Transition to higher education and subsequent years at university is a period of risk for weight gain¹. Prevention rather than treatment of obesity is a more favourable approach.

A gene-based personalised approach to dietary recommendations may motivate individuals to maintain or adopt positive dietary behaviours².

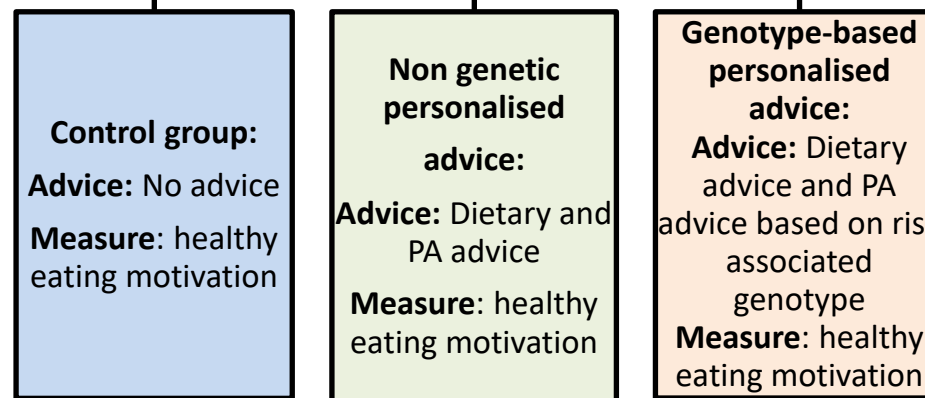
Objective: To determine the efficacy of genetics based personalised dietary and physical activity advice on healthy eating motivation in university students.

References:

1. Gropper, S. S., Simmons, K. P., Connell, L. J., & Ulrich, P. V. (2012). Changes in body weight, composition, and shape: A 4-year study of college students. *Applied Physiology, Nutrition, and Metabolism*, 37(6), 1118–1123
2. Celis-Morales, C., Lara, J., & Mathers, J. C. (2015). Personalising nutritional guidance for more effective behaviour change. *The Proceedings of the Nutrition Society*, 74(2), 130–138.

Methods:

Recruitment: UG level 4 students, 18-25 years
Baseline measurements: BMI, BF%, healthy eating motivation, PA questionnaire, *FTO* genotype
358 initially agreed to participate, all baseline data for **153**
Randomisation to groups



Conclusion: Personalised advice appears to increase importance of food in the control of body weight in young adults who are overweight or obese. Provision of more targeted personalised health advice for young adults starting university may increase their motivation to adopt or maintain healthy eating behaviours.

Results:

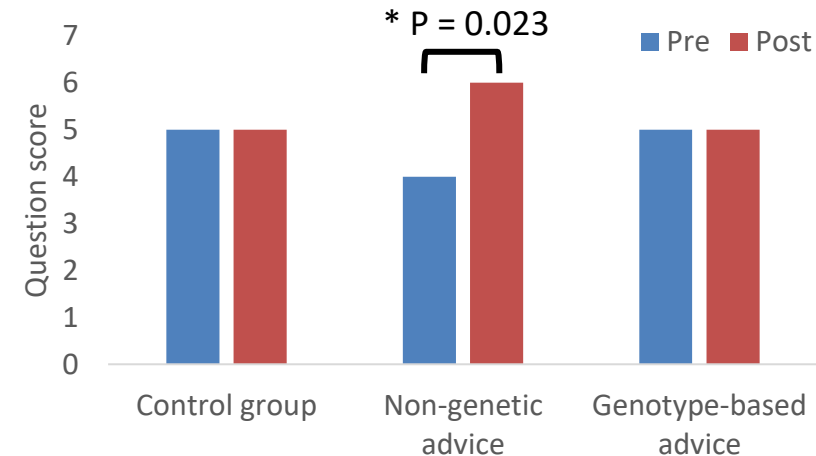


Fig 1. Median change in response of participants with a BMI above recommendation.

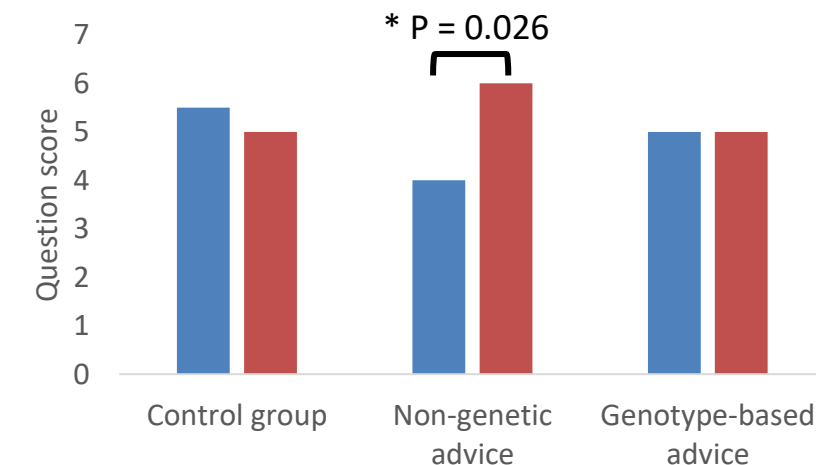


Fig 2. Median change in response of participants with a body fat percentage above recommendation.

Question: 'It is important that the food I eat helps me control my weight.'