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Does HERO always HELP? Differences in nutrient intake among obese subjects with and without type 2 diabetes mellitus prior to dietary intervention

Sze Yen Tan
University of Wollongong, syt153@uow.edu.au

Lynda J. Gillen
University of Wollongong, lgillen@uow.edu.au

Marijka Batterham
University of Wollongong, marijka@uow.edu.au

Xu-Feng Huang
University of Wollongong, xhuang@uow.edu.au

Cassandra J. Quick
University of Wollongong, cassy@uow.edu.au

See next page for additional authors

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Abstract
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Keywords
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Authors
Sze Yen Tan, Lynda J. Gillen, Marijka Batterham, Xu-Feng Huang, Cassandra J. Quick, Yasmine Probst, Serina Faraji, and Linda C. Tapsell

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SY Tan[1], L Gillen[1], M Batterham[1], XF Huang[1], C Quick[1], Y Probst[1], S Faraji[1], L Tapsell[2]
[1]Smart Foods Centre, University of Wollongong, NSW 2522
[2] National Centre of Excellence in Functional Foods, University of Wollongong, NSW 2522

Background
Dietary intervention for obese populations is vital in light of the growing incidence of obesity within Australia. The Healthy Eating Lifestyle Program (HELP) and Healthy Eating for the Reduction of Obesity (HERO) are randomized controlled dietary intervention studies that target this condition. Both studies aim to assist overweight volunteers with weight loss through structured dietary prescriptions.

Objective
This study aimed to identify differences in nutrient intakes and food patterns between obese subjects with and without type 2 diabetes mellitus (T2DM).

Design
HELP study included adult healthy obese subjects while HERO study included adult obese subjects with T2DM. Participants were recruited through the local media and internet mailing lists. Dietary macronutrient intakes were assessed at baseline using diet history interviews and analysed using FoodWorks Professional (version 4.00.1178). Gram amounts of macronutrient intake were obtained and compared using independent sample t-test. Reported foods were grouped for each study based on the Australian Guide to Healthy Eating food groups and fatty acid content.

Outcomes
Thirty-eight (15 males, 23 females) healthy obese subjects without T2DM and 50 (22 males, 28 females) obese subjects with T2DM were recruited. Weight (89.6 ± 13.2; 92.8 ± 15.4) and BMI (31.8 ± 3.5; 33.2 ± 4.2) of subjects, were not significantly different between studies. Reported intakes were significantly lower among obese volunteers with T2DM for energy ($P<0.001$), total fat ($P=0.011$), saturated fat ($P<0.001$), protein ($P=0.018$) and carbohydrate ($P<0.001$). Meat-based dishes, dairy foods and 'extra' foods were the major food groups contributing to saturated fat in both groups. No differences were found in reported intakes of monounsaturated fat, polyunsaturated fat and fibre between obese subjects with or without T2DM.

Conclusion
Presence of a disease state in obese subjects appear to have a significant impact on dietary intake and subjects appear to follow a lower-energy and lower-fat dietary pattern when they are diagnosed with T2DM.

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