White and Brown Rice are Equally Satiating and More Satiating than Glucose Beverage

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Abstract

Liquid meals may evoke weaker appetite signals than calorie-matched solid foods. The objective of this study was to compare the satiety response of white rice and brown rice (whole grain). Additionally, we measured the satiety response of white rice and brown rice compared to a calorie-matched glucose beverage. Each participant (n=20) completed three conditions, presented in random order. On three mornings, separated by at least one week, fasted subjects consumed either 400 kcalories of white rice, brown rice or glucose beverage for breakfast. Visual analogue scales (VAS) were used to assess hunger, satiety, fullness, and prospective food intake at baseline, 15, 30, 45, 60, 90, 120, 180, 240 minutes after breakfast. Gastrointestinal tolerance was assessed at 180 minutes after breakfast and over the 24 hours following each visit using questionnaires. *Ad libitum* lunch was provided at 240 minutes, measured by calorie intake. 24-hour food intake was also recorded by food diary. Satiety differed significantly among treatments, with increased satisfaction and fullness seen with both white rice and brown rice compared to glucose beverage. *Ad libitum* lunch food intake and 24-hour food intake did not differ significantly among treatments. Both white rice and brown rice improve satiety and decrease feelings of hunger more than calorie matched glucose beverage. Enhanced satiety did not translate into reduced food intake at lunch, supporting that many factors may override physiological hunger.

Keywords: ; a ; F a ; ; a

Introduction

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Methods

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Received October 21, 2013; **Accepted** December 12, 2013; **Published** December 14, 2013

Citation: Wang XS, Neill MO, Thomas W, Slavin J (2013) White and Brown Rice are Equally Satiating and More Satiating than Glucose Beverage . J Obes Weight Loss Ther 3: 201.doi:10.4172/2165-7904.1000201

Treatments

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Study session

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Palatability of treatment

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Palatability of *ad libitum* lunch

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Ad Libitum lunch and 24-hour energy intake

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Gastrointestinal tolerance

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Discussion

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