Variation in the effects of three different breakfast meals on subjective satiety and subsequent intake of energy at lunch and evening meal

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Source

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Abstract

PURPOSE:

To determine the relative impact of three iso-caloric breakfast meals, of variable composition, on satiety, hunger and subsequent intake of energy.

METHODS:

In a three-way, crossover design, 30 healthy men (age of 21.7 ± 1.2 years; BMI,

 23.1 ± 2.7 kg/m(2)) were randomised to one of three test breakfasts, on three separate occasions, separated by 1 week. The breakfasts consisted of eggs on toast, cereal (cornflakes) with milk and toast, or a croissant and orange juice. Subjective ratings of satiety, hunger, fullness and desire to eat were recorded at 30-min intervals by electronic visual analogue scales (VAS). Energy intake was assessed by weighed food intake at an ad libitum lunch and evening meal.

RESULTS:

Participants showed increased satiety, less hunger and a lower desire to eat after the breakfast containing eggs relative to the cereal (p < 0.02), and croissant-based meals (p < 0.0001). The egg breakfast was also accompanied by a significantly lower intake of energy relative to the croissant- and cereal-based breakfasts at the buffet lunch and evening meal, respectively, 1,284 ± 464 (egg) versus 1,442 ± 426 kcal (croissant), p = 0.03, 1,407 ± 379 (cereal) at lunch and 1,899 ± 729 (egg) versus 2,214 ± 620 kcal (cereal), p = 0.02, 2,047 ± 712 (croissant) at evening meal. The breakfast meal with the greatest effect on satiety and subsequent intake of energy was distinct in having the highest protein and lowest carbohydrate content relative to the other two breakfasts.

CONCLUSION:

These findings provide evidence to support the importance of food choice at breakfast as a means of increasing satiety in the morning and reducing energy intake at lunch.

Variation in the effects of three different breakfast meals on subjective satiety and subsequent intake of energy at lunch and evening meal, European Journal of Nutrition, September 2012. British Egg Industry Council website.

Link to full article: <u>http://nutritionandeggs.co.uk/research/variation-effects-three-different-breakfast-meals-subjective-satiety-and-subsequent-intake</u>