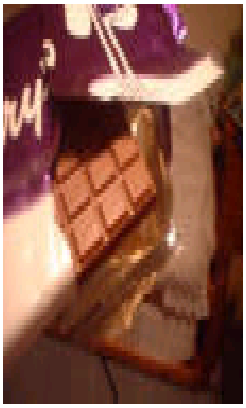
What's in a Snack?
Analysis of meals, snacks and drinks in the UK Women's Cohort Study

N.M. Sullivan and V.J. Burley
Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds, LS2 9JT

1. INTRODUCTION

Over the last 20 years the prevalence of overweight and obesity has almost trebled. There is an increasing tendency amongst Western populations to adopt a grazing rather than meal eating pattern. Snacking could potentially influence body weight both through effects on eating frequency, and also by altering the macronutrient balance of the diet.



2. AIM OF THE STUDY

This study aimed to investigate which foods women in the UK Women's Cohort Study choose to snack on and to explore the nutrient composition of meals, snacks and drinks.

3. SUBJECTS

186 subjects formed a sub-sample of the UK Women's Cohort Study, which is a prospective investigation of diet and cancer. Mean age was 55 year (8.2) and mean BMI was 25 (4.7).

4. METHODS

• An exploration was undertaken of the number and nature of meals, snacks and drinks consumed in 186 randomly selected food diaries, which had previously been fully coded.

• Within DANTE, (our in-house ACCESS based diary analysis programme) each food was categorised and coded as meal, snack or drink in origin, according to a time-based definition.

5. RESULTS

Table: Percentage contribution made by meals, snacks and drinks to energy and macronutrient intakes in this sample.

Mean % (S.D.) derived from:	Meals	Snacks	Drinks
Energy	73 (9.4)	15 (9.1)	12 (6.1)
Fat g	80 (11.4)	17 (11.4)	4 (3.5)
Protein g	82 (7.9)	8 (5.8)	10 (5.8)
Carbohydrate g	71 (11.7)	17 (10.3)	12 (8.4)
Englyst Fibre g	86 (10.1)	14 (9.6)	1 (2.7)
Sugar g	55 (16.2)	23 (14.4)	23 (14.4)
Energy Density kJ/g	6 (1.2)	9 (5.0)	1 (0.3)
Fat Density (Grams fat/100g food)	6 (2)	9 (7)	0.2 (0.2)

• Between-meal eating provided approximately 15% of dietary energy and 16% of total dietary fat in this sample.

• Drinks provided 12% of dietary energy, but 23% of sugars.

• The greatest contributors to snack energy were bananas, chocolate, cakes, biscuits, potato crisps and chocolate-coated biscuits.

	Per Meal	Per Snack	Significance
Mean Energy	478 (117.8)	146 (75.2)	<.001
% Energy from Fat	36 (7.8)	35 (15.6)	.217
% Energy from Sugars	17 (6.1)	35 (19.4)	<.001
% Energy from Protein	18 (4.6)	8 (5.2)	<.001
% Energy from CHO	46 (8.1)	54 (18.1)	<.001

6. CONCLUSION

• These data describe in detail the nutrient contribution made by between-meal eating

• Contrary to expectations, in this health-conscious cohort, snacks were found to be almost twice as energy dense and fat-rich as meals, but provided a similar percentage of energy from fat as meals.

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