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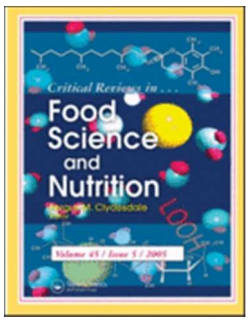

Systematic Literature Review Shows That Appetite Rating does Not Predict Energy Intake

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Systematic Literature Review Shows That Appetite Rating does Not Predict Energy Intake

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Running head: "Appetite does not predict energy intake"

Abbreviations: EI, energy intake; GLP, glucagon-like peptide; MFB, mealtime, food frequency and eating behaviour; NMS, nutrient, meal type or supplement; SLR, systematic literature review; VAS, visual analogue scale;

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ABSTRACT

Ratings of appetite are commonly used to assess appetite modification following an intervention. Subjectively rated appetite is a widely employed proxy measure for energy intake (EI), measurement of which requires greater time and resources. However, the validity of appetite as a reliable predictor of EI has not yet been reviewed systematically. This literature search identified studies that quantified both appetite ratings and EI. Outcomes were pre-defined as: 1) agreement between self-reported appetite scores and EI; 2) no agreement between self-reported appetite scores and EI. The presence of direct statistical comparison between the endpoints, intervention type and study population were also recorded. 462 papers were included in this review. Appetite scores failed to correspond with EI in 51.3% of the total studies. Only 6% of all studies evaluated here reported a direct statistical comparison between appetite scores and EI. χ^2 analysis demonstrated that any relationship between EI and appetite was independent of study type stratification by age, gender or sample size. The very substantive corpus reviewed allows us to conclude that self-reported appetite ratings of appetite do not reliably predict EI. Caution should be exercised when drawing conclusions based from self-reported appetite scores in relation to prospective EI.

197 Words

Key words; Appetite, Self-report appetite, Appetite rating scales, Visual Analogue Scales, energy intake, systematic review.

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INTRODUCTION

Appetite modification is a common strategy for modifying energy intake (Avena, Murray, & Gold, 2013), for example in assessment of interventions for management of obesity (Flint, Raben, Blundell, & Astrup, 2000). Generic study design aimed at appetite modification involves subjects (or patients) rating appetite subjectively before and after an intervention (e.g. drug, supplement, preload), followed by some form of test meal and evaluation of food intake or eating behaviour. Controls may be different interventions in cross-over or parallel format, or occasionally different subject groups. Appetite ratings are usually determined subjectively by the participant most often using visual analogue scales (VAS) and energy intake (EI) may be measured, overtly or covertly, using a suite of objective measures available.

VAS have been commonly used for over thirty years in numerous fields of research, sample populations and age groups, spanning various clinical settings to community environments. VAS to assess appetite uses phrases representing polar extremes of a subjective feeling of appetite; these often include hunger, fullness, satisfaction, motivation to eat and prospective food consumption (Blundell et al., 2010). Although it is suggested that VAS are a reliable and reproducible tool for assessing appetite (Flint et al., 2000), the relationship to EI has not previously been reviewed systematically. As product development, analysis of nutrients and the direction of strategies to modify appetite are a cornerstone of functional nutrition (in particular in obesity management) there is an unmet need to understand the true predictive value of appetite scores in relation to EI.

We aimed to address this question systematically by identifying and reviewing the corpus of studies that have measured both subjective ratings of appetite and EI in order to evaluate the predictive rigour of subjective appetite scores for EI.

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METHODS

Literature search strategy

This was a systematic literature review (SLR) using predefined and agreed search terms, inclusion criteria and review strategy, as defined by the Cochrane Handbook for Systematic Reviews for Interventions (Higgins, 2011). The search terms (**Table 1**) and databases were selected through discussion between the research team and an independent research librarian in order to obtain a comprehensive generation of sources.

Insert Table 1 here

Following an initial combined search of Scopus, Ovid Medline and Web of Science literature databases, the titles and abstracts were screened to generate a refined list of sources and these were de-duplicated using Endnote Online™. Meta analyses, review papers, position statements and animal studies were not included and studies that did not measure both appetite and EI, or showed non-relevance to the topic, were excluded.

Scoring criteria and statistics

Initially, we aimed to evaluate the proportion of papers reporting a significant correlation between VAS appetite ratings and EI. However, only a small proportion (6.3%) of the corpus reported such analyses directly, so we devised a scoring matrix.

- "Link" studies included:

A. Studies reporting significant and co-directional effects on both appetite scores and EI (for example, increased hunger scores and increased EI, or decreased hunger scores and decreased EI).

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B. Studies reporting no significant effect on either endpoint (for example, no alterations in hunger scores or EI). This is because neither variable changed in response to a particular event or intervention.

- "No Link" studies included:

A. Studies reporting that appetite scores OR EI were significantly perturbed (for example, increased/decreased hunger scores but no changes in EI, or no changes in hunger scores but increased/decreased EI).

B. Studies reporting significant differences in appetite scores and EI, but in opposite directions (for example, significant increase in hunger scores and significant decrease in EI).

Further information extracted from each paper included the journal title, year of publication, author, health status of sample group, intervention or perturbation under study, type of VAS used, measure of EI, sample size, sex and age of sample group. In addition, we ascertained if a link between appetite scores and EI was determined "directly" by the original authors through statistical analysis (for example using regression or correlation) or "indirectly" inferred by the reader using reported significance and direction as described above. Two researchers independently scored each paper in the corpus; where disagreement occurred a third scorer independently evaluated the paper.

Statistics

Inter-rater variability was quantified using Cohen's kappa analysis (Hayes & Hatch, 1999). Pearson's chi-square analysis was used to test the frequency of study characteristic distribution between the two outcomes (i.e. "link", "no link"). Cohen's kappa is a test of inter-observer agreement for categorical data, it is considered more robust than simple percentage agreement calculation since this test accounts for the agreement occurring by chance. The value derived is proportional agreement. Landis and Koch (Landis & Koch, 1977) suggest

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0.61-0.80 is substantial agreement and any higher number represents almost perfect agreement.

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RESULTS

Overview of the literature search, screening and studies included

The initial combined search of Scopus, Ovid Medline and Web of Science during the period 1999-2015 returned 3,842 results. Following primary exclusion based on the abstract (generally due to lack of subjective appetite measurement) and de-duplication, the revised list comprised 714 studies. Upon reading these papers in full, a further 252 were excluded due to the absence of EI measurement and/or non-relevance to the topic. 462 studies were therefore included this review (**Figure 1**). For a tabulated list of all studies included in the review please refer to the Online Supplementary Material**.**

Insert Figure 1 here

There was good agreement between all scorers represented by Cohen's kappa values of 0.89 (authors ST/YC *vs* GMH, 1999-2014) and 0.96 (authors GMH *vs* LJO, 2015). Over the literature search time period, the number of included studies generally increased, with around 20 *per annum* in 2000-2006 rising to around 40 *per annum* in 2009-2014 (**Figure 2)**. As the majority of papers (93.7%) did not report a direct statistical comparison between VAS ratings and EI, the relationship between these two measures was opaque in reports and required us to develop an independent scoring system (*vide supra*).

Insert Figure 2 here

Overall relationship between appetite scores and EI

Out of the 462 studies included in this review, 225 (49%) demonstrated a "link" between self-reported appetite scores and measurement of EI. In 237 (51%) of the studies there was "no link" between appetite scores and EI (definite disagreement between the outcomes).

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Direct and indirect comparisons;

The majority of papers (93.7%) did not directly (statistically) compare self-reported appetite ratings and EI, meaning that the relationship between the two measures was deduced by the researcher by identifying whether statistically significant changes occurred and were co-directional between the two outcome measures. Studies that were categorized as demonstrating a "link" between self-reported appetite scores and EI were approximately 30% more likely to have reported a direct statistical comparison the two measurements ($p = .001$).

Assessment of factors potentially influencing outcome

Effect of Age and Sex: Twenty-one studies used a sample population of children and/or adolescents (4-17 years), whilst an elderly sample population (≥65 years) was used in nine studies. The 432 remaining studies used participants with large and variable age ranges (18-64 years) making it unfeasible to conduct a separate analysis of young adult and middle-aged subjects. Due to the small number of studies in the ≥65 years category, Chi Squared analysis was not appropriate because the assumptions of this test would be violated. Assessment of the data reported in **Table 2** shows that, across all age groups, the frequency of studies are equivocal in the "link" and "no link" categories. The Chi squared test showed no significant difference between the expected frequencies and the observed frequencies between participant sex (Table 2). These data demonstrate no advantage of sex in predicting EI from self – reported appetite scores.

Effect of Sample Size: The Chi squared test showed no significant difference between the expected frequencies and the observed frequencies in any sample size category (**Table 2**). These data demonstrate no advantage in predicting EI from self-reported appetite scores by stratifying by sample size.

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Effect of Health Status: Studies were divided according to the reported health status of the sample population. 342 studies used "healthy individuals", 115 studies used individuals with clinically defined illness/disease ("non-healthy") and 5 studies did not report the health status of their chosen study population. The Chi squared test showed no significant difference between the expected frequencies and the observed frequencies in either category. These data demonstrate no advantage in predicting EI from self –reported appetite scores by stratifying for health status. The non-healthy group included ninety-nine studies which had recruited overweight and/or obese participants (47 = link; 53 = no link). Ten studies had recruited examined diabetic participants (9 = link; 1 = no link) and six studies had recruited participants with eating disorders (2 = link; 4 = no link). Of the five studies that did not report the health status of their participants, three demonstrated a link and two demonstrated no link. There were insufficient data available in these sub-groups to conduct further Chi-squared tests.

Effects of the Type of Self- Reported Appetite Measurement Tool and VAS Length: The most commonly used VAS length was 100mm, which was used in 337 (73%) of the studies examined in this review: 8 (2%) studies used VAS <100mm; 43 (9%) studies used VAS >100mm; 43 (9%) papers did not state the length of VAS. 31 (7%) researchers reported using an alternative form of measurement for obtaining appetite scores (predominantly Likert scales). The most repeatedly used VAS was the one devised by Hill and Blundell (Blundell et al., 2010). 9 studies reported the use of an electronic form of VAS. The Chi squared test showed no significant difference between the expected frequencies and the observed frequencies in any category. These data demonstrate no advantage for any particular length of VAS scale for predicting EI from self-reported appetite scores.

Effect of Intervention Type: The different types of interventions observed in the corpus of papers were categorized as follows: nutrient, meal type or supplement group (NMS *e.gs* carbohydrate *vs*. fat, glycaemic load) = 279, (60%) of studies; meal time, food frequency and

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eating behavior (MFB *e.g.* TV viewing during meal times, portion size information) = 58 (12%); pharmacological (*e.g.* GLP analogues, appetite hormone administration) = 40 (9%); food form (e.g. Solid *vs*. liquid) = 36 (8%); other = 23 (5%); exercise (*e.g.* intensity or duration) = 18 (4%); age/sex (8 (2%) (**Figure 3**). The Chi squared test did show significant difference between the expected frequencies and the observed frequencies when stratified by intervention type ($p<.001$). The intervention type with the highest proportion of studies reporting a link between subjective appetite scores and EI was the "pharmacological" group: of the 40 studies identified in this category, 26 (65%) demonstrated a link and 14 (35%) showed no link. It is further of note that nine of the studies in this category explored the effect of glucagon-like peptide (GLP) of which five showed a link between self -reported appetite scores and EI. The group of papers that were categorized as examining "food form" contained the highest number of studies that failed to observe a link between self-rated appetite scores and EI. 30 out of the 36 studies (83.3%) reported no link.

Insert figure 3 here

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DISCUSSION

This was a systematic literature review addressing an unmet need to evaluate critically the validity of the putative link between subjectively rated appetite (implied by many of the reviewed papers as a proxy measure of prospective energy intake) and measures of energy intake. Studies were selected on the basis of reporting and quantifying both appetite and EI. A striking finding of this review was that the vast majority of studies (93.7%) did not undertake any statistical analysis to compare self-reported appetite scores and EI. This rendered formal approaches to meta-analysis impossible due to the degree of data disconnection, and required us to develop an assessment criterion to determine if the direction of significant change in response to an intervention was in agreement (link) or not (no link) between the two endpoints. Papers that had reported a direct statistical comparison between the two measures were more likely fall into the 'link' category. This may suggest selective reporting in the "no link" studies: they either did not undertake statistical analyses or chose not to report their findings.

Over half of the studies included in our analysis did not demonstrate a link between appetite scores and EI. Of the 225 that demonstrated a link between appetite scores and EI, 54 (24%) scored a double negative (*i.e.* neither subjective appetite score nor EI changed from baseline; Supplementary Online Information). These studies were conservatively categorized as a "link", although it may be argued that a double-negative does not imply that both measures relied upon the same mechanism or processes. If double-negative studies are considered as an independent category, the number of papers evidencing a definitive link between appetite scores and subsequent EI declines to 37%, further strengthening our conclusion.

The heterogeneous nature of the studies included in this review provided scope for analysis according to factors such as age, sex, sample size, health status, self-reporting measurement tool (VAS length), and intervention type (Table 1). No study factor improved the utility of

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self-reported appetite scores on EI, other than "intervention type": of the 40 studies identified in the "pharmacological" group, 26 (65%) demonstrated a link, while 14 (35%) showed no link. A subset of 9 studies belonging to the pharmacological group used appetite hormone administration as an intervention strategy, the most common of which was glucagon-like peptide (GLP). In response to subcutaneous (Flint, Kapitza, & Zdravkovic, 2013; Horowitz et al., 2012) or intravenous administration (Gutzwiller, Drewe, et al., 1999; Gutzwiller, Goke, et al., 1999; Naslund et al., 1999) of GLP, 55% of these studies found VAS appetite scores could predict EI reliably. It is well documented that GLP is an effective appetite modifier (Dailey & Moran, 2013) and its potent physiological mechanism of action is perhaps the reason why a more consistent relationship between appetite scores and EI was observed.

In regard to *ad libitum* measures, recording the number of calories consumed at a test meal is commonplace, and is considered to be an objective reflection of appetitive response (Blundell et al., 2010). The general protocol involves a test meal in which participants are instructed to consume as much as they like and/or until they reach satiation. The reproducibility of *ad libitum* test meals as an acute measure of EI is robust in normal weight, obese and overweight sample groups of both children and adults (Arvaniti, Richard, & Tremblay, 2000; Lara, Taylor, & Macdonald, 2010; N, SG, PB, RC, & GH, 2008). Booth (2009) however, questioned the nature of the subjective and objective divisions of appetite measurement, arguing that subjective ratings actually reflect an objective approach and that the rarified environmental control applied in so-called objective *ad libitum* test settings may inherently perturb intake. Our analysis supports the distinction made by Booth between emotive and behavioural aspects of appetite and feeding behaviour, and demonstrates unequivocally that one is not a proxy for the other. A *sequella* of this separation is that the research community needs to reflect on the meaning and implication of "appetite" as an emotive and self-reported measure, and re-evaluate its purpose. Rated appetite may function

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similarly to eating behaviour questionnaires (Lowe & Butryn, 2007) as a proxy of individuals' attitude to food coupled to state at time of assessment. Other factors governing actual food intake include: sensorial environment (including exposure to food cues and palatable foods) social factors; entrained behaviour related to food timing; consequences of energy expenditure and homeostasis. These factors are all underwritten by the physiological governance of EI which includes gut hormone release, stretch sensing, and micronutrient sensing in the gut. We suggest there is an unmet need to 1) undertake further systematic studies that weight the impact of these variables in the governance of EI, and 2) identify biomarkers of behavior. Until modelling or biomarkers are validated and become widely available, we argue that the best estimate of EI remains the measurement of EI itself.

A second *sequella* of our analysis of critical relevance to policy and regulation is that health claims on the energy intake-modifying potential of formulations based on their impact on rated appetite should not be supported. Reformulation and product development of satiating foods and nutraceuticals is a key strategy in obesity control (Van Kleef, Van Trijp, Van Den Borne, & Zondervan, 2012). This report demonstrates that appetitive sensations is not a robust endpoint, or even screening tool, for the development of functional foods.

Conclusions

- Subjective appetite scores are ineffective in predicting energy intake in studies attempting to modify and/or assess appetite;
- Emotional and behavioural aspects of appetite are distinct and not proxies for each other, more work is needed to explore their independence and independent value;
- The development of novel methods to predict EI is needed.

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No authors declare a conflict of interest

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Figure and Table Legends

Table 1. *Search terms used in this study and their combinatorial permutations*

Table 2 *Frequencies and expected frequencies of studies by population, intervention and measurement tools used. Chi squared and p values shown. For expected cell frequencies less than 5, the chi-square approximation may not be reliable. A standard and conservative rule is that 'No more than 20% of the expected frequencies (shown in brackets) are less than 5 and all individual expected counts are 1 or greater. For 'Age (years) category data reported in the majority of studies were not sufficiently detailed to better categorise studies based on age of population assessed, therefore the data violate assumptions of the test and so* χ^2 *and p value are not reported here.*

Acronyms; NMS= nutrient, meal type or supplement; MFB= mealtime, frequency or behaviour.

Figure 1 ***PRISMA Flowchart.*** *The figure summarises the literature search workflow, starting with searches across three databases using defined terms, screening, merging, de-duplicating and production of the final corpus of papers.*

Figure 2 ***Number of studies within each search year*** *Analysis of number of eligible papers by year shows progressive increase in papers per annum in this area.*

Figure 3 ***Frequency of studies reporting either a link or no link between self- report appetite and EI divided by study interventions*** *(n = 462). NMS= Nutrient, meal type or supplement; MFB= Mealtime, frequency or behavior.*

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TABLES

Appetite **OR** Hunger **OR** Hungry **OR** "Desire to eat"	**AND**	Satiation **OR** Satiety	**AND**	"Energy consumption" **OR** "Energy intake" **OR** "Food consumption" **OR** "Food intake"

Table 1. *Search terms used in this study and their combinatorial permutations*

Groups	Link	No-Link	Total	χ^2	p Value

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	Frequency; observed (expected)	%	Frequency; observed (expected)	%			
Age (years)							
4-17	10	47.6	11	52.4	21	-	-
18-64	210	48.6	222	51.4	432		
≥65	5	55.6	4	44.4	9		
Gender							
Male	78 (79.4)	47.8	85 (83.6)	52.2	163	0.209	0.900
Female	35 (36.0)	47.3	39 (37.9)	52.7	74		
Mixed	112 (109.6)	49.8	113 (115.4)	50.2	225		
Sample size							
≤10	18 (19.9)	43.9	23 (21.0)	56.10	41	1.954	0.744
11-30	133 (135.9)	77.7	146 (143.1)	22.3	279		
31-50	47 (45.3)	50.5	46 (47.7)	49.5	93		
51-100	22 (18.5)	57.9	16 (19.5)	42.1	38		
>100	5 (5.4)	45.5	6 (5.6)	54.5	11		
Health Status							
Healthy	165 (166.5)	48.2	177 (175.4)	51.8	342	0.109	0.740
Non-Healthy	60 (58.4)	50.0	60 (61.6)	50.0	120		
VAS Length							
<100mm	5 (3.9)	62.5	3 (4.1)	37.5	8	9.764	0.439
100mm	165 (164.1)	48.9	172 (172.9)	51.1	337		
≥101mm	16 (20.9)	38.1	27 (21.1)	61.9	43		
Likert scale	15 (15.1)	48.4	16 (15.9)	51.6	31		
Not stated	24 (20.9)	55.8	19 (22.1)	44.2	43		
Intervention Type							
Age/Gender	4 (3.9)	50.0	4 (4.1)	50.0	8	25.800	<.001
Exercise	4 (8.7)	22.2	14 (9.2)	77.8	18		
Food Form	6 (17.5)	16.7	30 (18.5)	83.3	36		
MFB	27 (28.2)	46.6	31 (29.8)	53.4	58		
NMS	146 (136.0)	52.3	133 (143.0)	47.7	279		
Pharmacological	26 (19.5)	65.0	14 (20.5)	35.0	40		
Other	12 (11.2)	52.2	11 (11.8|)	47.8	23		

Table 2 *Frequencies and expected frequencies of studies by population, intervention and measurement tools used. Chi squared and p values shown. For expected cell frequencies less than 5, the chi-square approximation may not be reliable. A standard and conservative rule is that 'No more than 20% of the expected frequencies (shown in brackets) are less than 5 and all individual expected counts are 1 or greater. For 'Age (years) category data reported in the majority of studies were not sufficiently detailed to better categorise studies based on age of population assessed, therefore the data violate assumptions of the test and so* χ^2 *and p value are not reported here.*

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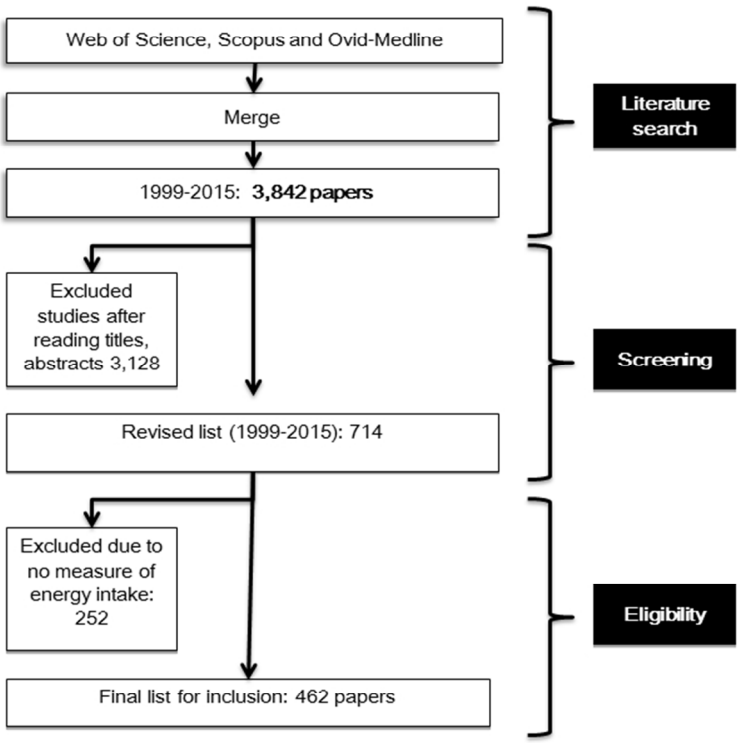

Fig 1

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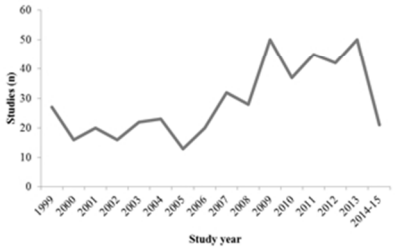

Fig 2

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Fig 3

190x254mm (96 x 96 DPI)

Online supplemental material

Systematic Literature Review Shows That Appetite Rating does Not Predict Energy Intake

ONLINE SUPPLEMENTARY MATERIAL

[1,†] Guy M. Holt, [2, †]Lauren J. Owen [1]Sophie Till, [1]Yanying Cheng,

[1]Vicky A. Grant, [1]Charlotte J. Harden & [1,3]Bernard M. Corfe*

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Table 1 – Included studies

1st Author	Journal	Year	Disease Status	Perturbation/ Intervention	VAS	Sample size (n =)	Sex	Age (years)
Cecil, JE	Physiology and behaviour	1999	Healthy	High fat vs high carbohydrate soups	100mm	9	Male	21 - 35
Chapman, IM	American Journal of Clinical Nutrition	1999	Obese	Fat and carbohydrate infusions	100mm	11	Male	19 - 26
De Graaf, C	Physiology and behaviour	1999	Healthy	Palatability	150mm	35	Male/Female	18-26
Gielkens, HA	JPEN	1999	Healthy	IV amino acids	100mm	6	Male/Female	22-24
Gutzwiller, JP	American Journal of Physiology	1999	Type II Diabetes	GLP - 1	11 point category scale	12	Male	53 - 57
Gutzwiller, JP	Gut	1999	Healthy	GLP - 1	11 point category scale	16	Male	23-24
Holt, SH	International journal of food sciences and nutrition	1999	Healthy	High fat vs high carb breakfast	100mm	14	Male/Female	20 - 24
Kahler, A	Nutrition	1999	Healthy	ETO	100mm	24	Male	21-34
Kong, MF	Peptides	1999	Healthy	Oral fructose and glucose	100mm	8	Male	21-34
Lang, V	European Journal of Clinical Nutrition	1999	Healthy	Protein source	100mm	9	Male	24.6±2.1
Latner, JD	Appetite	1999	Healthy	High protein, high carbohydrate or balanced	120mm	12	Female	18 - 37
Long, SJ	British Journal of Nutrition	1999	Healthy	GLP - 1	100mm - Rodgers and Blundell	10	Male	20 - 29
Maas, MI	Appetite	1999	Healthy	Olestra	100mm - Blundell	18	Male/Female	23-25
Melanson, KJ	British Journal of Nutrition	1999	Healthy	Aspartame, fat or carbohydrate consumption	not stated	10	Male	19-31
Melanson, KJ	American Journal of Physiology	1999	Healthy	Carbohydrate vs fat	100mm	10	Male	18-30
Naslund, E	International Journal of Obesity	1999	Obese	GLP- 1	Not stated	8	Male	32-38
Rolls, BJ	American Journal of Clinical Nutrition	1999	Healthy	Water	100mm	29	Female	20 - 45
Rolls, BJ	American Journal of Clinical Nutrition	1999	Obese	Energy density	100mm	34	Female	18 - 45
Romon, M	American Journal of physiology	1999	Healthy	Fat vs carbohydrate meal	100mm	22	Male/Female	18-40
Speechly, DP	International Journal	1999	Obese	Frequency of eating	100mm	7	Male	37.4±18.5

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	of Obesity							
Speechly, DP	Appetite	1999	Healthy	Frequency of eating	100mm - Hill	8	Male	22-33
Stubbs, RJ	European Journal of Clinical Nutrition	1999	Healthy	High fat, high carb or high protein	Hill and Blundell	16	Male	27.5±9.42
Vozzo, R	American Journal of Physiology	1999	Healthy	Nitric Oxide Synthase inhibitors	100mm	21	Male	18-26
Westerterp-Plantenga, M	Journal of applied physiology	1999	Healthy	Altitude	100mm	8	Male	23-37
Westerterp-Plantenga, M	American Journal of Clinical Nutrition	1999	Overweight	Aperitif	100mm	52	Male/Female	18-50
Yeomans,M	Behaioural pharmacology	1999	Healthy	Alcohol + dietary restraint	500mm	24	Male	25.7±1.8
Yeomans,M	Appetite	1999	Healthy	Palatability	500mm	50	Male	18-45
Arvanti, K	British Journal of Nutrition	2000	Healthy	Buffet type meal	100mm - Rolls	14	Male	26 - 48
Chapelot, D	Physiology and behaviour	2000	Healthy	Sibutramine	100mm	24	Male	18 - 25
Flint, A	International journal of obesity	2000	Healthy	Single test meal	100mm	55	Male	25 - 26
French, SJ	Gastroenterology	2000	Healthy	Long chain fatty acids	100mm	10	Male	18 - 35
Green, SM	British Journal of Nutrition	2000	Obese	High fat vs high carbohydrate	100mm	15	Female	21 - 56
Gutzwiller, JP	American Journal of Physiology	2000	Healthy	CCK	10 point scale	32	Male	21- 33
Holt, SH	International journal of food sciences and nutrition	2000	Healthy	Sugar free vs sugar rich	100mm	11	Male	18 - 30
Johnstone, AM	British Journal of Nutrition	2000	Healthy	Iso -energetically dense foods	100mm	8	Male	20-34
Kirkmeyer, SV	International Journal of Obesity	2000	Healthy	Food attributes	13 point category scale	24	Male/Female	19 - 24
Lawton, CL	British Journal of Nutrition	2000	Healthy	Degree of saturation of fatty acids	100mm	40	Male/Female	18 - 36
Mathey, M	Food quality and preference	2000	Elderly	Carbohydrate/ fat preloads	150mm - Hulshof	25	Male/Female	Elderly
Mattes, RD	Physiology and behaviour	2000	Overweight	Hydroxycitric acid	9 point category scale	106	Male/Female	18 - 65
Rayner, CK	Scandinavian Journal of Gastroenterology	2000	Healthy	Age	100mm	10	Male	68–73 + 22 - 30

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Rolls, BJ	American Journal of Clinical Nutrition	2000	Healthy	Volume of food	100mm	28	Male	20-33
Spechley, DP	European Journal of Clinical Nutrition	2000	Healthy	High fat	100mm - Hill	12	Male	33.2±12.2
Zandstra, EH	European Journal of Clinical Nutrition	2000	Children & Elderly	Age	150mm - Hulshof	87	Male/Female	(4 ± 6), (18 ± 26) (61 ± 86)
Beckoff, K	American Journal of Physiology	2001	Elderly	Glucose supplementation	100mm	8	Male/Female	65-84
Flint, A	International Journal of Obesity	2001	Obese	GLP - 1	100mm	18	Male	21 - 57
Gibson, EL	Appetite	2001	Healthy	Hunger status	100mm	30	Male/Female	18-65
Gosnell, BA	International Journal of Eating Disorders	2001	Binge Eating Disorder	Food presentation	Likert scale	20	Male/Female	18 - 65
Gustafon, DR	Appetite	2001	Healthy	CMP	100mm - Rodgers, Blundell	52	Male/Female	18 - 35
Hetherington, M	Physiology and behaviour	2001	Healthy	Alcohol	150mm	26	Male	18 - 40
Holt, SH	Journal of the American Dietetic Association	2001	Healthy	Breads	100mm	10	Male/Female	19 - 39
Kamphuis, M	European Journal of Clinical Nutrition	2001	Overweight	linolenic vs oleic acid	100mm	16	Male/Female	20 - 56
Kovacs, E	Physiology and behaviour	2001	Obese	Hydroxycitrate	100mm	21	Male/Female	29 - 57
Kovacs, E	International journal of obesity	2001	Overweight	Modified guar gum	100mm	29	Male	19 - 56
Mattes, RD	Physiology and behaviour	2001	Healthy	Bevarage viscosity	9 point category	98	Male/Female	35 - 61
Russell, AW	Diabetic medicine	2001	Type 1 Diabetes	Acute hyperglycaemia	100mm	8	Male/Female	18 - 35
Stubbs, RJ	European Journal of Clinical Nutrition	2001	Overweight	Sensorially distinct foods	66mm - Hill and Blundell	12	Male	39.7±2.9
Van Wymelbecke, V	American Journal of Clinical Nutrition	2001	Healthy	Fat substituted meals	100mm	10	Male	19 - 24
Verdich, C	International Journal of Obesity	2001	Obese	Weight reduction	Not stated	35	Male	18 - 50
Westerterp-Plantenga, M	American Journal of Clinical Nutrition	2001	Obese	PEGylated human OB protein	100mm	30	Male	38 - 52
Woodend, DM	Appetite	2001	Healthy	Sucrose and safflower preloads	100mm	15	Male	18 - 30
Yeomans,M	International journal of obesity	2001	Healthy	Disused fat and carbohydrate preloads	100mm	24	Male	22-24
Yeomans,M	Physiology and	2001	Healthy	Fat content of soups	500mm	16	Male	18 - 30

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	behaviour							
MacIntosh, CG	American Journal of Gastroenterology	2001	Healthy	Small intestine nutrient infusion	100mm	26	Male	18-84
Alper, CM	International journal of obesity and metabolic related disorders	2002	Healthy	Peanut consumption	9 point category scale	15	Male/Female	24 - 42
Anderson, GH	American Journal of Clinical Nutrition	2002	Healthy	Carbohydrate	100mm	14	Male	18 - 30
Bendixen, H	American Journal of Clinical Nutrition	2002	Healthy	Modified fats	100mm - Flint	11	Male	24 - 25
Burton - Freeman, B	American Journal of Clinical Nutrition	2002	Healthy	Addition of fat or fibre	100mm	16	Male/Female	20 - 50
Gray, RW	Physiology and behaviour	2002	Healthy	Volume and energy content	100mm	20	Male	23-25
Kaplan, RJ	International journal of food sciences and nutrition	2002	Elderly	Dietary carbohydrates and glycaemic response	100mm - Rodgers	40	Male/Female	60 - 82
Kovacs, E	European Journal of Clinical Nutrition	2002	Overweight	Guar gum	100mm	15	Male	35- 53
Lavin, JH	International Journal of Obesity	2002	Healthy	Sucrose	100mm	6	Male	20 - 37
Lee, A	Diabetes obesity and metabolism	2002	Type II Diabetes	Miglitol	100mm	8	Female	42 - 72
Long, SJ	British Journal of Nutrition	2002	Healthy	Exercise	100mm - Rodgers	23	Male	18 - 40
Marmonier, C	American Journal of Clinical Nutrition	2002	Healthy	Snack composition	100mm	8	Male	20 - 25
Rolls, BJ	Physiology and behaviour	2002	Obese	Volume of liquid food	100mm	54	Female	18 - 45
Westerterp-Plantenga, M	International Journal of Obesity	2002	Overweight	Hydroxycitrate	not stated	20	Male	18 - 31
Westerterp-Plantenga, M	International Journal of Obesity	2002	Healthy	Meal frequency regulation	100mm	20	Male	18 - 31
Wilson, M	American Journal of Clinical Nutrition	2002	Elderly	Liquid dietary supplements	100mm	30	Male/Female	70 +, 20 - 40
Yeomans,M	Nutritional neuroscience	2002	Healthy	Alcohol	100mm - Yeomans	18	Male	19 - 34
Alfenas, RCG	Obesity research	2003	Healthy	fat sources	9-point scale	20	Male/Female	24.7±7.8
Almiron - Roig, E	Physiology and behaviour	2003	Healthy	caloric beverages	9-point scale	32	Male/Female	18-35

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Ball, SD	Pediatrics	2003	Obese Adolescents	GI index	100mm	16	Male/Female	12-18
Barkeling, B	International journal of obesity	2003	Obese	sibutramine	100mm	36	Male/Female	20-65
Barkeling, B	Obesity research	2003	Obese	vision and eating behaviour	100mm	18	Male/Female	46±14
Doucet, E	Appetite	2003	Obese	reduction in body weight	150mm (Hill and Blundell)	19	Male/Female	41.9±1
Feinle,C	American Journal of Physiology	2003	Healthy	duodenal fat infusion	not stated	16	Male	21-39
Flint, A	Obesity research	2003	Overweight	dietary fat types	100mm	19	Male	20-35
Goedecker, JH	International journal of obesity	2003	Healthy	orlistat	100mm	19	Male	21±1.6
Gray, RW	Nutritional neuroscience	2003	Healthy	preload volume	not stated	18	Male	26±1.3
Hall, C	British journal of clincal nutrition	2003	Healthy	casein and whey protein	100mm	25	Male/Female	23.5±2.2
Howarth, NC	Journal of nutrition	2003	Healthy	fermentable and no fermentable fibre supplements	100mm	11	Male/Female	23-46
Kamphuis, M	European journal of clincal nutrition	2003	Overweight	conjugated linoleic acid supplementation	100mm	54	Male/Female	20-50
Kamphuis, M	Physiology and behaviour	2003	Healthy	6-*n*-propylthiouracyl sensitivity	100mm	36	Male/Female	31±10
Kamphuis, M	British journal of clinical nutrition	2003	Healthy	linoleic acid	100mm	24	Female	26.9±6
Kovacs, E	British journal of clinical nutrition	2003	Healthy	enterostatin	100mm	12	Male/Female	34±11
Raben, A	American journal of clinical nutrition	2003	Healthy	similar energy dense meals rich in fat, carbohydrate, protein or alcohol	100mm	19	Male/Female	20-30
Sorenson, LB	International journal of obesity	2003	Healthy	GLP-2	100mm	18	Male/Female	21-35
Stratton, RJ	Journal of nutrition	2003	Healthy	short-term continuous enteral tube feeding	100mm	6	Male	26±8.3
Sturm, K	Journal of clinical endocrinology and metabolism	2003	Undernourished	under and well-nourishment and age	100mm	24	Female	59.8±1.6
Tsofliou, F	International journal of obesity	2003	Obese	moderate physical activity	100mm	10	Female	50±8.5
Warren, JM	Paediatrics	2003	Children	low GI breakfasts	not stated	37	Male/Female	9-12
Almiron - Roig, E	Physiology and behaviour	2004	Healthy	beverage and solid food	9-point scale	32	Male/Female	18-35

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Appleton, KM	Journal of human nutrition and dietetics	2004	Healthy	sweet and non-sweetened lunch	100mm	24	Female	not stated
Archer, BJ	British journal of clinical nutrition	2004	Healthy	fat replacement by inulin or lupin-kernel in sausages	150mm	33	Male	37-64
Bellisle, F	Appetite	2004	Healthy	non food-related environmental stimuli	9-point scale	48	Female	18-50
Burton - Freeman, BM	American journal of clincal nutrition	2004	Healthy	fat availability and sex	100mm	15	Male/Female	20-50
Caton, SJ	Physiology and behaviour	2004	Healthy	alcohol	100mm	12	Male	18-35
Chapelot, D	Physiology and behaviour	2004	Healthy	differentiate meals and snacks	100mm	24	Male	19-25
Cornier, MA	Appetite	2004	Obese	short-term overfeeding	100mm	13	Male/Female	25-45
Devitt, AA	Appetite	2004	Healthy	food unit size and energy density	9-point scale	26	Male/Female	18-50
Erdmann, J	Journal of clinical endocrinology and metabolism	2004	Healthy	various test meals	100mm	14	Male/Female	22.6±0.6
Farschi, H	International Journal of Obesity and related medical disorders	2004	Healthy	irregular and regular meal pattern	100mm	9	Female	18-42
Latner, JD	International Journal of Eating disorders	2004	Bulimia Nervosa and Binge Eating Disorder	binge eating and satiety	160mm (Hill and Blundell)	18	Female	34.8±9.8
Leddy, J	Obesity research	2004	Obese	methylphenidate	100mm	9	Male	18-40
Parker, B	European journal of clinical nutrition	2004	Healthy	age	100mm	45	Male/Female	18-35
Parker, B	Appetite	2004	Healthy	age and gender	100mm	32	Male/Female	65-85
Rolls, BJ	Journal of the American Dietetic Association	2004	Healthy	increasing portion size of a sandwich	100mm	75	Male/Female	20-45
Rolls, BJ	Journal of the American Dietetic Association	2004	Healthy	energy density and portion size	100mm	42	Female	19-45
Ryan, M	Clinical nutrition	2004	Elderly	oral supplements differing in fat and carbohydrate content	100mm	16	Male/Female	≥65
Sanggaard, KM	British journal of clinical nutrition	2004	Healthy	whole milk and fermented milk with same fat and lactose content	100mm	8	Male	23.9±2.7

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Snoek, HM	American journal of clinical nutrition	2004	Obese	sensory-specific satiety	150mm	44	Female	18-65
Sturm, K	American journal of clinical nutrition	2004	Healthy	antral area	100mm	24	Male/Female	21-83
Walden, HM	Obesity research	2004	Healthy	a new dental approach	100mm	32	Male/Female	18-65
Yeomans, MR	International journal of obesity	2004	Healthy	manipulated palatability	10-point scale	40	Female	24.5±1.9
Alfenas, RCG	Diabetes care	2005	Healthy	glycaemic index and load	not stated	39	Male/Female	24.9±0.8
Berti, C	British journal of clinical nutrition	2005	Healthy	minor cereal and pseudo cereal products	not stated	51	Male	22.8±2.2
Burton - Freeman, BM	Journal of nutrition	2005	Healthy	preloads varying in fatty acid composition and content	100mm	25	Male/Female	21-50
Caton, SJ	Physiology and behaviour	2005	Healthy	pleasure and alcohol	100mm	12	Male	18-50
Chapman, I	Diabetolgia	2005	Type II Diabetes	pramlintide	100mm	26	Male	18-70
Drapeau, V	British journal of clinical nutrition	2005	Healthy	appetite sensations	150mm (Hill and Blundell)	51	Male/Female	20-50
King, NA	British journal of clinical nutrition	2005	Healthy	xylitol and polydextrose	150mm (Hill and Blundell)	15	Male/Female	30.1
Mattes, RD	Physiology and behaviour	2005	Healthy	soup	9-point scale	31	Male/Female	18-60
Oesch, S	American Journal of Physiology	2005	Healthy	protein preload	10-point scale	20	Male	21-43
Robinson, TM	Physiology and behaviour	2005	Healthy	palatability	100mm	20	Male	23.8±1
Vander, J	Journal of the American College of nutrition	2005	Overweight/Obese	eggs	not stated	30	Female	25-60
Westerterp-Plantenga, M. S.	International journal of obesity	2005	Healthy	capsaicin	100mm	24	Male/Female	20--30
Yeomans, MR	Physiology and behaviour	2005	Healthy	palatability, learned satiety and energy density	not stated	16	Male	21.4±0.4
Degen, L	Digestion	2006	Healthy	IV GLP-1	100mm		Male/Female	
Moorhead, SA	British journal of clinical nutrition	2006	Healthy	fibre content and physical structure of carrots	100mm	100	Male/Female	21-40
Blom, W	American Journal of Clinical Nutrition	2006	Healthy	high-protein breakfast	150mm	15	Male	18-26
Borzoei, S	European journal of clinical nutrition	2006	Healthy	fish and beef protein	100mm	23	Male	20-32
Bowen, J	Journal of clinical endocrinology and	2006	Healthy	various dietary proteins	100mm	72	Male	20-65

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	metabolism							
Bowen, J	Journal of clinical endocrinology and metabolism	2006	Overweight	different carbohydrate and protein preloads	100mm	19	Male	41-63
Cani, PD	European journal of clinical nutrition	2006	Healthy	oligofructose	100mm	10	Male/Female	21-39
Coelho, SB	Nutrition	2006	Overweight	peanut oil load	9-point scale	48	Male/Female	18-50
Erdmann, J	Regulatory peptides	2006	Obese	protein and carbohydrate meals	100mm	30	Male/Female	37.7±0.48
Flint, A	American Journal of Clinical Nutrition	2006	Healthy	glycaemic and insulinemic response	not stated	28	Male	24.8±0.5
Flood, J	Journal of the American Dietetic Association	2006	Healthy	beverage portion size	100mm	33	Male/Female	18-45
Iyer, S	Internaional journal of obesity	2006	Healthy	peanut oil	9-point scale	129	Male/Female	24±4
Logan, CM	European journal of clincal nutrition	2006	Healthy	Olibra fat emulsion	100mm	28	Male/Female	20-55
Metallinos - Katsaras, E	Topics in Clinical nutrition	2006	Healthy	GI load of pre exercise meal	100mm	12	Female	45-60
Norton, G	Physiology and behaviour	2006	Healthy	volume and variety	100mm	30	Male/Female	18-60
Oesch, S	Physiology and behaviour	2006	Healthy	gastric distension	100mm	24	Male	18-45
Pilichiewicz, A. N.	American Journal of Physiology	2006	Healthy	load and duration of duodenal lipid	100mm	11	Male	25±2
Rolls, BJ	Journal of the American Dietetic Association	2006	Healthy	larger portion sizes	100mm	32	Male/Female	19-45
Tsuchiya, A	Journal of the American Dietetic Association	2006	Healthy	yoghurt, fruit and dairy fruit drink	9-point scale	32	Male/Female	18-35
Williamson, DA	Appetite	2006	Overweight	mycoprotein, tofu and chicken	100mm	42	Female	18-50
Akhavan, T	American Journal of Clinical Nutrition	2007	Healthy	glucose-to-fructose ratios	not stated	19	Male	18-35
Bellisimo, N	Appetite	2007	Adolescents	short-duration physical activity and ventilation threshold	100mm	14	Male	9-14
Bellisimo, N	Paediatric research	2007	Adolescents	television viewing at meal time	100mm	14	Male	9-14
Caton, SJ	Physiology and behaviour	2007	Healthy	alcoholic drink	100mm	11	Male	18-50
Chapman, I	Obesity	2007	Healthy	low-dose Pramlintide	100mm	15	Male	18-70

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Chaput JP	Appetite	2007	Obese	diet and exercise	150mm (Hill and Blundell)	11	Male	25-45
Cotton, JR	Journal of human nutrition and dietetics	2007	Healthy	meals supplemented with either fat or carbohydrate	100mm	28	Male	19-31
Das, SK	American Journal of Clinical Nutrition	2007	Overweight	energy-restricted diets	100mm	34	Male/Female	24-42
Davy, BM	Appetite	2007	Healthy	sex differences	100mm	24	Male/Female	21-35
Drapeau, V	Appetite	2007	Obese	appetite sensations and satiety quotient	150mm (Hill and Blundell)	315	Male/Female	20-50
Erdmann, J	European journal of nutrition	2007	Healthy	potato, rice and pasta rich meals	100mm	11	Male	24.4±0.3
Erdmann, J	Regulatory peptides	2007	Healthy	exercise	100mm	14	Male/Female	24.6±0.7
Harper, A	British journal of clinical nutrition	2007	Healthy	chocolate milk drink and carbonated beverage	100mm	20	Male	20-40
Hetherington, M	Appetite	2007	Healthy	chewing gum	100mm	60	Male/Female	21.7±4
Jesudason, DR	British journal of clinical nutrition	2007	Healthy	pancreatic polypeptide	100mm	14	Male/Female	28.5±1.8
Julis, RA	Appetite	2007	Healthy	sweetened chewing gum	100mm	47	Male/Female	18-50
Keogh, JB	European journal of clincal nutrition	2007	Healthy	high soluble fibre, high amylose barley meals	100mm	14	Female	20-50
Martin, CK	Behaviour research and therapy	2007	Healthy	slower eating rates	100mm	48	Male/Female	18-65
Martins, C	Journal of endocrinology	2007	Healthy	exercise	not stated	12	Male/Female	25.9±4.6
Martins, C	British journal of clincal nutrition	2007	Healthy	exercise	100mm	25	Male/Female	29.8±11.6
Mattes, RD	Physiology and behaviour	2007	Overweight	fibre	100mm	25	Male/Female	18-55
Melanson, KJ	Nutrition	2007	Healthy	high-fructose corn syrup and sucrose	100mm	13	Female	20-60
Monsivais, P	American Journal of Clinical Nutrition	2007	Healthy	type of sweetener	100mm	37	Male/Female	20-29
Moran, L	American Journal of Clinical Nutrition	2007	Overweight, Polycystic Ovary Syndrome	weight loss	not stated	28	Female	34.3±5.2
Mourao, DM	International Journal of Obesity	2007	Obese	food form	electronic VAS	120	Male/Female	18-50
Pelkman, CL	American Journal of Clinical Nutrition	2007	Overweight/Obese	calium-gelled, alginate-pectin beverage	100mm	29	Female	20-40

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Poortvliet, P	British journal of clinical nutrition	2007	Healthy	Healthy meal	150mm (Hill and Blundell)	13	Male	26±4
Samra, R	American Journal of Clinical Nutrition	2007	Healthy	insoluble cereal fibre	100mm	31	Male	20-35
Sloth, B	American Journal of Physiology	2007	Obese	subcutaneous PYY	100mm	24	Male	39.5±6
Soenen, S	American Journal of Clinical Nutrition	2007	Healthy	high-fructose corn syrup, sucrose and milk preload	100mm	57	Male/Female	21.5±2.9
Sysko, R	International Journal of Eating disorders	2007	Binge Eating Disorder	test meal intake	150mm	12	Female	18-45
Van Walleghen, E	Obesity	2007	Healthy	pre-meal water consumption	100mm	50	Male/Female	21-80
Andrade, A	Journal of the American Dietetic Association	2008	Healthy	eating slowly	100mm	30	Female	22.9±7.1
Aston, L	International Journal of Obesity	2008	Overweight/Obese	reduced GI diet	100mm	19	Female	34-65
Bertenshaw, EJ	Physiology and behaviour	2008	Healthy	between-meal protein and carbohydrate beverage	500mm	18	Male	18-34
Blouin, M	Obesity	2008	Second generation Antipsychotic-treated	second generation antipsychotics	150mm	38	Male	18-65
Brennan, IM	American Journal of Physiology	2008	Healthy	CCK-8	100mm	10	Male	21-36
Burton - Freeman, BM	Physiology and behaviour	2008	Healthy	glycomacropeptide	100mm	20	Male/Female	21-50
Chearskul, S	American Journal of Clinical Nutrition	2008	Obese	weight loss	100mm	12	Male	33-64
Cheskin, L	Appetite	2008	Overweight/Obese	white button mushrooms substituted for beef	100mm	54	Male/Female	18-65
Diepvens, K	International Journal of Obesity	2008	Healthy	proteins and biopeptides	100mm	39	Male/Female	18-60
Diepvens, K	Physiology and behaviour	2008	Healthy	novel fat emulsion	100mm	41	Female	18-30
Doucet, E	Metabolism, clinical and experimental	2008	Healthy	standardised meal	150mm (Hill and Blundell)	25	Female	50.4±2
Feltrin, KL	American Journal of Clinical Nutrition	2008	Healthy	Intra duodenal infusions of lauric and oleic acid	100mm	13	Male	20-46
Ferriday, D	British journal of nutrition	2008	Healthy	food cues	100mm	50	Female	18-62
Frecka, JM	American journal of	2008	Obese	habitual meal patterns	not stated	21	Male/Female	18-50

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	clinical physiology							
Gregersen, NT	American Journal of Clinical Nutrition	2008	Healthy	repeated single meals	100mm	55	Male	19-36
Harthoorn, LF	Food quality and preference	2008	Healthy	aroma-texture congruency	100mm	32	Female	20-40
Hughes, GM	Lipids in health and disease	2008	Overweight	Korean pine nut oil	100mm	42	Female	33.8±15.6
Isaksson, H	Food and nutrition research	2008	Healthy	whole grain rye porridge	100mm		Male/Female	
Johnstone, AM	American Journal of Clinical Nutrition	2008	Obese	high-protein ketogenic diet	6-point electronic VAS	17	Male	20-65
Kawai, K	Eating and weight disorders	2008	Anorexia Nervosa	anorexia nervosa	100mm	24	Female	23.9±8.7
Latner, JD	Eating behaviours	2008	Binge Eating Disorder	energy density	160mm	30	Female	27±7.8
Lithander, FE	Lipids in health and disease	2008	Healthy	phosphatidylethanolamine	100mm	18	Male	25±7.5
Moorhead, SA	British journal of clinical nutrition	2008	Healthy	level of carbonation of sugar-sweetened beverages	100mm	30	Male/Female	20-40
Ruijschop, R	British journal of clinical nutrition	2008	Healthy	retro-nasal aroma	100mm	27	Male/Female	16-65
Stratton, RJ	American Journal of Clinical Nutrition	2008	Healthy	bolus tube feeding	6-point VAS	6	Male	33±8.4
Stull, AJ	Journal of the American Dietetic Association	2008	Healthy	liquid and solid meal replacement products	100mm	24	Male/Female	50-80
Therrien, F	Physiology and behaviour	2008	Healthy	psychosocial profiles and eating behaviours	Hill and Blundell	78	Male/Female	25-50
Zijlstra, N	International journal of obesity	2008	Healthy	viscosity	10-point scale	108	Male/Female	18-50
Almiron - Roig, E	Journal of human nutrition and dietetics	2009	Healthy	Iso-energetic snacks	70mm	30	Male/Female	22.1±2.0
Beck, EJ	Molecular nutrition and food research	2009	Overweight	oat β-glucan	100mm	17	Male/Female	19-45
Bellisle, F	Appetite	2009	Healthy	dietary restraint and environmental factors	100mm	40	Female	26.2±1.2
Belza, A	European journal of clinical nutrition	2009	Healthy	caffeine, green tea and tyrosine	100mm	20	Male	23.7±2.6
Bertenshaw, EJ	Appetite	2009	Healthy	beverage portion	500mm	28	Male	18-35
Blom, W	Physiology and	2009	Obese	Inter-meal interval	150mm	20	Male	18-57

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	behaviour							
Chevassus, H	European Journal of clinical pharmacology	2009	Healthy	fenugreek seed extract	not stated	12	Male	19-26
Daousi, C	Clinical endocrinology	2009	Type II Diabetes	GIP	100mm	12	Male	27-62
Dove, ER	American Journal of Clinical Nutrition	2009	Overweight	skin milk compared to a fruit drink	120mm	47	Male/Female	25-70
Flood - Obaggy, JE	Appetite	2009	Healthy	fruit in different forms	100mm (Hetherington and Rolls)	58	Male	18-45
Freeland, KR	Appetite	2009	Healthy	dietary fibre and glycaemic carbohydrate	100mm	33	Male	18-35
Gatta, B	British Journal of Nutrition	2009	Healthy	pharmacological modification of fatty acid metabolism	100mm	8	Male	20-30
Griifion - Roose,	Journal of nutrition	2009	Healthy	sweet and savoury meals	100mm	64	Male/Female	18-35
Hamedani, A	American Journal of Clinical Nutrition	2009	Healthy	high insoluble fibre vs. lowi fibre cereal	100mm	32	Male/Female	20-26
Huda, M	International Journal of Obesity	2009	Obese and post Gastrectomy	ghrelin	100mm	26	Male/Female	25-75
Juvonen, KR	Journal of nutrition	2009	Healthy	viscosity of oat bran-enriched beverages	100mm	20	Male/Female	22.6±0.7
Karagiozoglou-Lampoudi, T.	Annals of gastroeneterology	2009	Obese Adolescents	Intra-gastric balloon	not stated	14	Male/Female	18.5±2.5
King, NA	American Journal of Clinical Nutrition	2009	Overweight/Obese	exercise	electronic appetite rating	58	Male/Female	39.6±9.8
Lam, S	Physiology and behaviour	2009	Healthy	whey protein and glycomacropeptide	100mm	50	Male/Female	18-40
Latner, JD	International Journal of Eating disorders	2009	Binge Eating Disorder	food volume	160mm	30	Female	27±8.24
Luscombe - Marsh, N	British Journal of Nutrition	2009	Healthy	monosodium glutamate and inosine monophosphate-5 in high-protein meals	100mm	22	Male/Female	18-65
Maljaars, J	American Journal of Clinical Nutrition	2009	Healthy	fat saturation	electronic VAS	15	Male/Female	18-55
Mathern, JR	Phytotheraphy research	2009	Obese	fenugreek fibre	100mm	18	Male/Female	18-65
Mattes, RD	Journal of the American Dietetic Association	2009	Obese	food form and timing of ingestion	100mm	40	Male/Female	18-60
Misra, M	Obesity	2009	Obese Adolescent	increased carbohydrate	100mm	26	Female	12-18

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Mourad, C	Diabetes, obesity and metabolism	2009	Type II Diabetes	antihyperglycaemic medication	100mm	9	Male	61±4
Nieuwenhuizen, A. G.	British Journal of Nutrition	2009	Healthy	α-lactalbumin or gelatin with or with out added tryptophan	100mm	24	Male/Female	19-37
Parnell, JA	American Journal of Clinical Nutrition	2009	Overweight/Obese	Oligo fructose supplementation	100mm	48	Male/Female	20-70
Perrigue, M	Journal of the American Dietetic Association	2009	Healthy	added soluble fibre to low energy density liquid yoghurts	100mm	38	Male/Female	18-35
Peters, HP	American Journal of Clinical Nutrition	2009	Healthy	β-glucan and fructooligosaccharide	60mm	21	Male/Female	18-60
Ratliff, J	Nutrition research	2009	Healthy	carbohydrate restriction with or without additional dietary cholesterol from eggs	100mm	31	Male	40-70
Reinbach. HC	Clinical research	2009	Healthy	capsaicin, green tea and CH-19 sweet pepper	100mm	27	Male/Female	26.9±6.3
Rodriguez, E	Public health nutrition	2009	Overweight/Obese	hypo energetic diet	100mm	57	Female	20-35
Rondanelli, M	International journal of obesity	2009	Overweight	sublingual spray of natural plant extract	Haber score	27	Female	25-45
Schmid, S	American Journal of Clinical Nutrition	2009	Healthy	short-term sleep	9-point Likert scale	15	Male	20-40
Schroeder, N	Appetite	2009	Healthy	whole grain barley/wheat and refined rice-based foods	100mm	47	Male/Female	18-65
Seimon, RV	American Journal of Physiology	2009	Healthy	Intra duodenal lipid and carbohydrate	100mm	10	Male	19-47
Seimon, RV	American Journal of Clinical Nutrition	2009	Healthy	droplet size of intra duodenal fat emulsions	100mm	10	Male	18-47
Ueland, O	Journal of the American Dietetic Association	2009	Healthy	portion size information	100mm (SLIM)	33	Male/Female	not stated
Veldhorst, M	Clinical nutrition	2009	Healthy	α-lactalbumin, gelatin and gelatin + tryptophan	100mm	24	Male/Female	18-45
Veldhorst, M	British Journal of Nutrition	2009	Healthy	high and normal casien breakfast	100mm	25	Male/Female	18-40
Veldhorst, M	Physiology and behaviour	2009	Healthy	whey and casein soy	100mm	25	Male/Female	18-40
Veldhorst, M	Appetite	2009	Healthy	whey protein breakfast vs. whey without GMP-breakfast	100mm	25	Male/Female	18-40
Veldhorst, M	European journal of clinical nutrition	2009	Healthy	high and normal soy protein breakfast	100mm	25	Male/Female	18-40
Vitaglione, P	Appetite	2009	Healthy	β-glucan-enriched bread	100mm	14	Male/Female	20-29

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Vuksan, V	Nutrition, metabolism and cardiovascular disease	2009	Adolescents	viscosity of fibre preloads	100mm	31	Male/Female	15-18
Wong, CL	Journal of the American College of nutrition	2009	Healthy	processing, recipe and variety of pulses	100mm	43	Male	18-35
Zaveri, S	Journal of human nutrition and dietetics	2009	Healthy	cereal bar and almonds	100mm	45	Male	25-50
Zijlstra, N	Physiology and behaviour	2009	Healthy	viscosity	10-point scale	32	Male/Female	18-50
Clifton, PM	Australian journal of dairy technology	2009	Overweight/Obese	GMP	not stated	20	Male	20-65
Ali, A	American Journal of Clinical Nutrition	2010	Obese	betahistine hydrochloride	100mm	76	Female	18-70
Anderson, GH	American Journal of Clinical Nutrition	2010	Healthy	digestibility of starches	not stated	17	Male	20-30
Anton, SG	Appetite	2010	Obese	stevia, aspartame and sucrose	100mm	19	Male/Female	18-50
Asmar, M	American Journal of Physiology	2010	Healthy	glucose-dependant insulinotropic polypeptide	100mm	20	Male	23-29
Astbury, NM	British Journal of Nutrition	2010	Healthy	whey protein preload	500mm	50	Male/Female	19-45
Boelsma, E	Appetite	2010	Healthy	protein-carbohydrate meals	150mm	21	Male	19-57
Brondel, L	American Journal of Clinical Nutrition	2010	Healthy	acute partial sleep deprivation	100mm	12	Male	18-29
Chang U, J	Appetite	2010	Healthy	adding water-rich vegetables to parboiled rice	100mm (Hetherington and Rolls)	30	Female	20-40
Chapelot, D	British Journal of Nutrition	2010	Healthy	liquid yoghurt and chocolate bars	100mm	18	Male	18-25
Chevassus, H	European Journal of clinical pharmacology	2010	Overweight	fenugreek seed extract	not stated	39	Male	18-59
Clegg, M	Appetite	2010	Healthy	energy and macronutrient composition of breakfast	150mm	9	Male	25.5±1.6
Cornier, MA	Physiology and behaviour	2010	Healthy	sex-based differences	100mm	43	Male/Female	25-45
Farajian, P	Eating behaviours	2010	Healthy	snack including dried prunes	100mm	45	Male/Female	18-50
Furchner - Evanson, A	Appetite	2010	Healthy	type of snack	100mm 7-point	19	Female	25-54
Halford, J	Journal of	2010	Obese	sibutramine	100mm	30	Female	46±12.9

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	psychopharmacology							
Kamiji, M	European journal of clinical nutrition	2010	Gastric/Vagotomised patients	gastric/vagotomised patients	100mm	31	Male/Female	23-81
Karhunen, L	Journal of nutrition	2010	Healthy	psyllium fibre enriched meal	100mm	16	Male/Female	20-34
Keogh, J	British Journal of Nutrition	2010	Overweight/Obese	glycomacropeptide fractions	100mm	20	Male	20-65
Kristensen, M	Appetite	2010	Healthy	wholegrain vs. refined wheat bread and pasta	100mm	16	Male/Female	23.4±2.9
LaCombe, A	Nutrition journal	2010	Children	breakfasts differing in glycaemic load	5-point scale	23	Male/Female	4-6
Larson - Meyer, DE	Journal of the American College of nutrition	2010	Healthy	honey vs. sucrose	100mm		Male/Female	
Leidy, HJ	International journal of obesity	2010	Adolescents	protein-rich breakfast	100mm	13	Male/Female	13-17
Lluch, A	Food quality and preference	2010	Healthy	low-fat dairy product enriched with protein and fibre	100mm	121	Female	32.1±6.2
Martins, C	Journal of clinical endocrinology and metabolism	2010	Overweight/Obese	exercise-induced weight loss	100mm	22	Male/Female	18-60
Odunsi, S	Obesity	2010	Overweight/Obese	alginate	100mm	48	Male/Female	18-65
Pal, S	British Journal of Nutrition	2010	Healthy	protein meals	100mm	30	Male	18-30
Perrigue, M	Journal of food science	2010	Healthy	low-viscosity pectin	100mm	42	Male/Female	20-45
Poppit, SD	Physiology and behaviour	2010	Healthy	fatty acid chain length	100mm	18	Male	27.2±9.3
Ranawana, V	Appetite	2010	Healthy	caloric beverages	100mm	47	Male/Female	18-30
Ratliff, J	Nutrition research	2010	Healthy	consuming eggs for breakfast	100mm	21	Male	20-70
Reinbach. HC	Food quality and preference	2010	Healthy	hot spices	9-point scale	40	Male/Female	24.6±2.5
Shomaker, L	American Journal of Clinical Nutrition	2010	Adolescents	eating in the absence of hunger	100mm	78	Male/Female	13-17
Sivertsen, HK	Food and nutrition research	2010	Healthy	high protein meal products	100mm	27	Male/Female	20-28
Strik, C	Nutrition journal	2010	Healthy	SFA, MUFA or PUFA	100mm	18	Male	18-55
Tai, K	Appetite	2010	Healthy	nutritional supplementation	100mm	14	Male/Female	66-85
Vitaglione, P	Journal of the	2010	Healthy	barley β-glucan enriched snack	100mm	16	Male/Female	18±0.5

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	American College of nutrition		Adolescents					
Wills, HG	Food and nutrition research	2010	Healthy	increasing doses of fibre	100mm	20	Male/Female	18-65
Abou - Samra, R	Nutrition journal	2011	Healthy	different protein sources	100mm	32	Male	20-35
Akhavan, T	International Journal of Obesity	2011	Healthy	eating and drinking sugars and whey protein	motivation to eat VAS	43	Male	19-28
Apolzan, JW	British Journal of Nutrition	2011	Healthy	food form in resistance trained and sedentary older adults	13-point scale	24	Male/Female	≥60
Blanchet, R	Appetite	2011	Neuromedin-β p.P73T Mutation	neuromedin-β	150mm	153	Female	29.9±8.6
Blatt, AD	Journal of the American Dietetic Association	2011	Healthy	increasing protein content of meals	not stated	18	Female	20-40
Blatt, AD	American Journal of Clinical Nutrition	2011	Healthy	hidden vegetables	100mm	41	Male/Female	20-45
Bodinham, C	British Journal of Nutrition	2011	Healthy	whole-grain wheat	100mm	14	Male/Female	26±1.4
Carter, BE	British Journal of Nutrition	2011	Healthy	monosodium glutamate	100mm	35	Female	20-40
Chan She Ping-Delfos,	Clinical nutrition	2011	Healthy	calcium and vitamin D	100mm (Hill & Blundell)	11	Male/Female	20-70
Charlton, K	Appetite	2011	Healthy	pork, beef and chicken	100mm	30	Female	18-50
Clegg, ME	International journal of food sciences and nutrition	2011	Healthy	high-fat diet	150mm	10	Male	22.4±4.6
Clegg, ME	European journal of clinical nutrition	2011	Healthy	high-fat diet	150mm	11	Male	24.7±3.1
Ford, HE	European journal of clinical nutrition	2011	Healthy	sucralose	100mm	8	Male/Female	22-27
Geraedts, M	PloS one	2011	Obese	pea protein	100mm	20	Male	33±4
Gilbert, JA	British Journal of Nutrition	2011	Obese	milk supplementation	150mm	25	Female	20-50
Hess, JR	Appetite	2011	Healthy	short-chain fructooligosaccharides	100mm	20	Male/Female	18-27
Hetherington, M	Appetite	2011	Healthy	chewing gum	100mm	53	Female	18-55
Higgs, S	Appetite	2011	Healthy	focusing on food	100mm	29	Female	20±2.3
Juvonen, KR	Nutrition, metabolism and	2011	Healthy	semisolid meal enriched in oat bran	100mm	20	Male/Female	23.3±0.85

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	cardiovascular disease							
Karl, JP	Physiology and behaviour	2011	Obese	eating rate	9-point Likert scale	25	Male/Female	18-55
Keogh, J	Appetite	2011	Healthy	bread-based test meals	7-point VAS	20	Male/Female	20.1-44.8
Kral, TV	American Journal of Clinical Nutrition	2011	Healthy Children	eating breakfast compared to skipping breakfast	100mm	21	Male/Female	8-10
Krog - Mikkelsen, I	Journal of nutrition	2011	Healthy	low GI diet	not stated	29	Female	20-40
Leidy, HJ	British Journal of Nutrition	2011	Healthy Adolescents	protein-rich beverage at breakfast	100mm	15	Male/Female	13-17
Lemmens, SG	Nutrition journal	2011	Healthy	high protein vs. high carbohydrate meal intake	100mm	38	Male/Female	18-51
Lemmens, SG	Journal of nutrition	2011	Healthy	staggered meal consumption	100mm	38	Male/Female	24±6
Lemmens, SG	Physiology and behaviour	2011	Overweight	stress	100mm	42	Male/Female	19-55
Makris, A	Obesity	2011	Healthy	GI and protein	100mm	16	Male/Female	21-54
Maljaars, PWJ	British Journal of Nutrition	2011	Healthy	fat	electronic device	15	Male/Female	18-55
Mehra, R	Obesity	2011	Obese Children	feeding frequency	"Freddy" scale	35	Male/Female	6-10
Mirza, N	International Journal of Pediatric Obesity	2011	Obese Youths	High and low GI meals	not stated	88	Male/Female	7-15
Mollard, RC	Applied physiology nutrition and metabolism	2011	Healthy	pulses	100mm	25	Male	20-30
Monsivais, P	Appetite	2011	Healthy	soluble fibre dextrin	100mm	36	Male/Female	20-34
Peters, HP	International Journal of Obesity	2011	Healthy	protease inhibitor	64mm	22	Male/Female	18-60
Pinelli, N	Journal of Clinical Pharmacology	2011	Healthy	admission time of exenatide	100mm	20	Male/Female	≥18
Pombo - rodriguez, S	International journal of food sciences and nutrition	2011	Healthy	eggs	not stated	31	Male/Female	37.5±9.9
Poppit, SD	Appetite	2011	Overweight	whey protein-enriched water	100mm	46	Female	18-45
Rosen, LA	Nutrition journal	2011	Healthy	cereal breakfasts	100mm	10	Male/Female	26±1.1
Smit, HG	European journal of clinical nutrition	2011	Healthy	Fabuless (Olibra)	100mm	24	Male/Female	18-43
Sorenson, J	Nutrition and diabetes	2011	Healthy	dark and milk chocolate	100mm	16	Male	26.8±5.6

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Verhoef, SP	Nutrition and metabolism	2011	Healthy	Korean pine nut triacylglycerol	100mm	39	Female	18-45
Verhoef, SP	British Journal of Nutrition	2011	Healthy	oligofructose	100mm	31	Male/Female	20-60
Willbond, SM	European journal of clinical nutrition	2011	Healthy	high protein preloads	150mm (Hill and Blundell)	10	Male	18-55
Willis, HJ	Appetite	2011	Healthy	fibre-matched liquid and solid breakfasts	100mm	14	Female	18-35
Yeomans, MR	American Journal of Clinical Nutrition	2011	Healthy	mixed carbohydrate and protein loads	100mm	36	Male/Female	19-33
Allirot, X	Appetite	2012	Healthy	validation of a buffet meal design	70mm	14	Male	22-33
Andrade, A	International journal of behavioural physiology and physical activity	2012	Healthy	slow and fast eating rates	100mm	30	Female	18-45
Barone Lumaga, R	Food and function	2012	Healthy	fruit based and β-glucan beverage	100mm	14	Male/Female	24-39
Brennan, IM	American Journal of Physiology	2012	Obese	macronutrients and protein loading	100mm	32	Male	21-47
Brindal, E	European journal of clinical nutrition	2012	Children	GI load	100mm	39	Male/Female	10-12
Carter, BE	Appetite	2012	Overweight	beverages containing soluble fibre, caffeine and green tea catechins	100mm	77	Male/Female	18-45
Cassady, BA	American Journal of Clinical Nutrition	2012	Healthy	beverage consumption	100mm	52	Male/Female	18-50
Chan,YK	Physiology and behaviour	2012	Healthy	Fabuless (Olibra)	100mm	18	Male	18-55
Chungchunlam, SMS	Appetite	2012	Healthy	time interval of preloads	100mm	19	Female	18-40
Darzi, J	European journal of clinical nutrition	2012	Healthy	propionate-rich sourdough	100mm	12	Male/Female	25-45
Dougkas, A	British Journal of Nutrition	2012	Healthy	dairy snacks	adaptive VAS software	40	Male	18-50
Finlayson, G	Journal of nutrition	2012	Healthy	savoury or sweet drinks	100mm	30	Female	18-30
Geliebeter, A	Appetite	2012	Obese	cold pressor test	100mm	20	Female	35.9±6.2
Georg Jensen, M	Food chemistry	2012	Healthy	alginate based supplements	100mm	8	Male/Female	20-45
Hogenkamp, PS	Appetite	2012	Healthy	large volume liquid and semi-solid foods	100mm	53	Male/Female	18-40

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Horowitz, M	Diabetes research and clinical practice	2012	Type 2 Diabetes	liraglutide (GLP-1 analogue)	100mm	48	Male/Female	18-65
Hull, S	Appetite	2012	Healthy	polydextrose	64mm	34	Male/Female	18-60
Ibrugger, S	Appetite	2012	Healthy	flaxseed dietary fibre supplements	100mm	24&20	Male/Female	25.7&24.9
Isakasson, H	Physiology and behaviour	2012	Healthy	whole grain rye breakfast	100mm	71	Male/Female	18-60
Jensen, MG	Obesity	2012	Healthy	alignate-based preload	100mm	20	Male/Female	18-40
Karalus, M	Journal of the academy of nutrition and dietetics	2012	Healthy	fermentable fibres	100mm	22	Female	18-40
Kissileff, HR	American Journal of Clinical Nutrition	2012	Obese	leptin injections	150mm	10	Male/Female	33.6±2.8
Klingenberg, L	American Journal of Clinical Nutrition	2012	Adolescents	sleep restriction	100mm	21	Male	15-19
Klosterbuer, AS	journal of agriculture and food chemistry	2012	Healthy	resistant starch and pullulan	100mm	20	Male/Female	18-60
Lippl, F	Regulatory peptides	2012	Healthy	ghrelin infusion	100mm	20	Male	2±50.4
Lorensen, J	European journal of clinical nutrition	2012	Overweight	milk proteins	100mm	17	Male	18-50
Maersk, M	European journal of clinical nutrition	2012	Obese	sucrose-sweetened vs. iso-caloric milk drink	100mm	24	Male/Female	20-50
Mehta, S	American Journal of Clinical Nutrition	2012	Healthy	visual food cues	100mm	23	Male/Female	18-50
Miernert, L	Appetite	2012	Healthy	pork proteins at breakfast	100mm	136	Male/Female	15-17
Mollard, RC	British Journal of Nutrition	2012	Healthy	pulse-containing meal	motivation to eat VAS	24	Male	20-30
Nguyen, V	Nutrition journal	2012	Healthy	popcorn and potato chips	100mm	35	Male/Female	20-50
Nolan, L	Appetite	2012	Healthy	drug use	90mm	62	Male/Female	18.68±2.62
Rutters, F	International Journal of Obesity	2012	Healthy	sleep	100mm	16	Male	18-30
Schecter, A	American Journal of Physiology	2012	Healthy	sleep	Likert scale	27	Male/Female	30-45
Smit, H	International Journal of Nutrition	2012	Healthy	lipid emulsion	100mm	24	Male/Female	18-47
Smith, CE	British Journal of Nutrition	2012	Healthy	yellow pea protein and fibre	100mm	20	Male	20-30
Sorenson, J	Clinical nutrition	2012	Nutritionally at-	food sensory quality	150mm	22	Male/Female	≥18

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			risk					
Tamam, S	Applied physiology nutrition and metabolism	2012	Overweight/Obese	glucose drink and exercise	100mm	36	Male	9-14
Touyarou, P	Appetite	2012	Healthy	fibre-enriched bread	100mm	38	Male/Female	20-45
Wiessing, K	Appetite	2012	Healthy	single or multi item *ad libitum* test meal	100mm	30	Male	22±5
Wijlens, A	Obesity	2012	Healthy	oral and gastric stimulation	100mm	26	Male	21±2
Wilkinson, L	Appetite	2012	Healthy	portion-size selection	100mm	30	Male/Female	25.4±6.93
Aeberli, I	European journal of nutrition	2013	Healthy	Altitude	100mm	23	Male/Female	20-60
Allirot, X	Physiology and behaviour	2013	Healthy	Morning eating episodes	70mm	20	Male	27.1±1.3
Astbury, N	British Journal of Nutrition	2013	Healthy	Polydextrose	500mm??	21	Male/Female	18-45
Belza, A	The American Journal of Clinical Nutrition	2013	Healthy	protein-induced satiety	100mm	25	Male	19.1-24.8
Bertenshaw, EJ	British Journal of Nutrition	2013	Healthy	thickness/creaminess of high-protein drinks	100mm	26	Male	18-35
Bilski, J	Annals of Agricultural and Environmental medicine	2013	Healthy	Intensity of exercise	100mm	12	Male	28.7±4.1
Brindal, E	British Journal of Nutrition	2013	Healthy Children	glycaemic load	100mm	40	Male/Female	10-12
Buckland, NJ	Appetite	2013	Healthy	diet-congruent foods	100mm	26	Female	18-55
de Ruyter, DC	PloS one	2013	Healthy Children	sugar-free vs. sugar-sweetened beverages	5-point scale	203	Male/Female	7-11
Douglas, SM	Appetite	2013	Healthy	protein yogurt snacks	100mm	15	Female	18-50
Dube, MC	Appetite	2013	Type I and II Diabetes	exercise	150mm (Hill and Blundell)	16	Male/Female	>18
Fallaize, R	European journal of nutrition	2013	Healthy	breakfast meal	3 point PRO-diary watch	30	Male	18-35
Flint, A	Journal of diabetes, obesity and metabolism	2013	Type II Diabetes	GLP-1 (Liraglutide)	100mm	18	Male/Female	18-70
Geliebeter, A	Annals of Nutrition and Metabolism	2013	Healthy	potatoes and other carbohydrate test meals	100mm	12	Male/Female	18-50
Gibbons, C	The journal of	2013	Overweight/Obe	varying fat and carbohydrate	not stated	16	Male/Female	45.6±6.2

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	clinical endocrinology and metabolism		se	meals				
Gregersen, NT	British Journal of Nutrition	2013	Healthy	mustard, horseradish, black pepper and ginger	100mm	22	Male	19-37
Harrington, DM	Appetite	2013	Overweight/Obese	activity related energy expenditure	100mm	82	Male/Female	20-35
Harold, JA	Appetite	2013	Overweight	herb extract and inulin fibre	100mm	58	Female	18-65
Higgs, S	Appetite	2013	Healthy	prolonged chewing	100mm	43	Male/Female	mean 20±2.82
Hogenkamp, S	Obesity	2013	Healthy	calorie anticipation	100mm	12	Female	mean 23±1.8
Houchins, JA	International Journal of Obesity	2013	Obese	solid vs. beverage forms of fruit and veg	electronic device	34	Male/Female	18-38
Karl, JP	Obesity	2013	Healthy	eating rate and energy density	100mm (SLIM)	20	Male/Female	18-55
Kristensen, M	Nutrition, metabolism and cardiovascular disease	2013	Healthy	flaxseed dietary fibers	100mm	18	Male	18-40
Leidy, HJ	American Journal of Clinical Nutrition	2013	Overweight/Obese Adolescents	higher-protein breakfast	100mm	20	Female	15-20
Lund, MT	European Journal of applied physiology	2013	Healthy	aerobic training	100mm	20	Male	25.5±1
Maffeis, C	European journal of clincal nutrition	2013	Obese Children	exercise	coloured boxes	10	Male/Female	9±0.9
Martens, E	American Journal of Clinical Nutrition	2013	Healthy	high protein breakfast	100mm	79	Male/Female	18-70
Mathes - vliegen, E	Obesity surgery	2013	Obese	Intra-gastric balloon treatment	100mm	42	Male/Female	22-64
Mattes, RD	Physiology and behaviour	2013	Obese	chewing	electronic device	60	Male/Female	18-50
McNeil, J	European journal of clinical nutrition	2013	Overweight/Obese	short sleep duration	150mm	75	Male	30-50
Nunez, MF	Applied physiology nutrition and metabolism	2013	Healthy	sodium ingestion	100mm	16	Male	20-30
Ogden, J	Appetite	2013	Healthy	distraction	5 point Likert scale	81	Female	18-40
Ortinau, L	Nutrition journal	2013	Healthy	increased dietary protein yoghurt snack	100mm	32	Female	27±2
Panhani, S	Appetite	2013	Healthy	caloric beverages	100mm	29	Male/Female	20-30
Panhani, S	Appetite	2013	Healthy	familiar beverage intake	4 point VAS	29	Male/Female	20-30

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Patel, BP	Journal of food science	2013	Healthy	After school snack of raisins	100mm	26	Male/Female	8-11
Patel, BP	Applied physiology nutrition and metabolism	2013	Children	raisins	100mm	26	Male/Female	8-11
Penaforte, FR	Nutrition research and practice	2013	Healthy	sugar consumption	100mm	16	Female	22.4±4.1
Poppit, SD	Journal of the American College of nutrition	2013	Healthy	GMP	100mm	18	Male	29.2±15
Ranawana, V	European journal of clinical nutrition	2013	Healthy	polydextrose	100mm	26	Male	18-45
Reis, C	British Journal of Nutrition	2013	Type II Diabetes	peanuts	100mm	15	Female	18-50
Rosenkilde, M	Journal of applied physiology	2013	Overweight	endurance exercise	100mm	16	Male	20-40
Ryan, AT	American Journal of Clinical Nutrition	2013	Healthy	Intra-duodenal fat and protein	100mm	20	Male	18-58
Swoboda, C	Eating behaviours	2013	Healthy	chewing gum	100mm	44	Male/Female	18-50
Wanders, A	British Journal of Nutrition	2013	Healthy	bulking, viscous and gel-forming dietary fibres	100mm	120	Male/Female	18-50
Wien, M	Nutrition journal	2013	Overweight	Hass avocado intake	100mm	26	Male/Female	25-65
Zafar, T	Nutrition research	2013	Healthy	whey protein sweetened beverages	100mm	30	Female	17-28
Zhu, Y	British Journal of Nutrition	2013	Healthy	masticatory cycles	100mm	21	Male	18-40
Zhu, Y	International journal of food sciences	2013	Healthy	food form	100mm	19	Male	18-50
Zhu, Y	PloS one	2013	Healthy	food viscosity	100mm	15	Male	18-40
El Khoury, D	Clinical nutrition	2014	Healthy	yoghurt (protein: carb)	100mm	20	Male	20-30
Hartvigsen, ML	European journal of nutrition	2014	Metabolic Syndrome	Concentrated arabinoxylan and β-glucan	100mm	15	Male/Female	52-72
Vulholm, S	Appetite	2014	Healthy	10% fat sausages w/added wheat or rye bran	100mm	28	Male	20-40
Wu, M	European journal of nutrition	2014	Healthy	Low GI and High GI breakfast	100mm	14	Male	18-50

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1st author	Journal	Year
Cecil, JE	Physiology and behaviour	1999
Chapman, IM	American Journal of Clinical Nutriti	1999
De Graaf, C	Physiology and behaviour	1999
Gielkens, HA	JPEN	1999
Gutzwiller, JP	American Journal of Physiology	1999
Gutzwiller, JP	Gut	1999
Holt, SH	International journal of food scienc	1999
Kahler, A	Nutrition	1999
Kong, MF	Peptides	1999
Lang, V	European Journal of Clinical Nutriti	1999
Latner, JD	Appetite	1999
Long, SJ	British Journal of Nutrition	1999
Maas, MI	Appetite	1999
Melanson, KJ	British Journal of Nutrition	1999
Melanson, KJ	American Journal of Physiology	1999
Naslund, E	International Journal of Obesity	1999
Rolls, BJ	American Journal of Clinical Nutriti	1999
Rolls, BJ	American Journal of Clinical Nutriti	1999
Romon, M	American Journal of physiology	1999
Speechly, DP	International Journal of Obesity	1999
Speechly, DP	Appetite	1999
Stubbs, RJ	European Journal of Clinical Nutriti	1999
Vozzo, R	American Journal of Physiology	1999
Westerterp- Plantenga, M	Journal of applied physiology	1999
Westerterp- Plantenga, M	American Journal of Clinical Nutriti	1999
Yeomans,M	Behaioural pharmacology	1999
Yeomans,M	Appetite	1999
Arvanti, K	British Journal of Nutrition	2000
Chapelot, D	Physiology and behaviour	2000
Flint, A	International journal of obesity	2000
French, SJ	Gastroenterology	2000
Green, SM	British Journal of Nutrition	2000
Gutzwiller, JP	American Journal of Physiology	2000
Holt, SH	International journal of food scienc	2000
Johnstone, AM	British Journal of Nutrition	2000
Kirkmeyer, SV	International Journal of Obesity	2000
Lawton, CL	British Journal of Nutrition	2000
Mathey, M	Food quality and preference	2000
Mattes, RD	Physiology and behaviour	2000
Rayner, CK	Scandinavian Journal of Gastroente	2000
Rolls, BJ	American Journal of Clinical Nutriti	2000
Spechley, DP	European Journal of Clinical Nutriti	2000
Zandstra, EH	European Journal of Clinical Nutriti	2000
Beckoff, K	American Journal of Physiology	2001
Flint, A	International Journal of Obesity	2001
Gibson, EL	Appetite	2001
Gosnell, BA	International Journal of Eating Disc	2001
Gustafon, DR	Appetite	2001
Hetherington, M	Physiology and behaviour	2001

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Holt, SH	Journal of the American Dietetic As	2001
Kamphuis, M	European Journal of Clinical Nutriti	2001
Kovacs, E	Physiology and behaviour	2001
Kovacs, E	International journal of obesity	2001
Mattes, RD	Physiology and behaviour	2001
Russell, AW	Diabetic medicine	2001
Stubbs, RJ	European Journal of Clinical Nutriti	2001
Van Wymelbecke, V	American Journal of Clinical Nutriti	2001
Verdich, C	International Journal of Obesity	2001
Westerterp- Plantenga, M	American Journal of Clinical Nutriti	2001
Woodend, DM	Appetite	2001
Yeomans,M	International journal of obesity	2001
Yeomans,M	Physiology and behaviour	2001
MacIntosh, CG	American Journal of Gastroenterol	2001
Alper, CM	International journal of obesity and	2002
Anderson, GH	American Journal of Clinical Nutriti	2002
Bendixen, H	American Journal of Clinical Nutriti	2002
Burton - Freeman, B	American Journal of Clinical Nutriti	2002
Gray, RW	Physiology and behaviour	2002
Kaplan, RJ	International journal of food scienc	2002
Kovacs, E	European Journal of Clinical Nutriti	2002
Lavin, JH	International Journal of Obesity	2002
Lee, A	Diabetes obesity and metabolism	2002
Long, SJ	British Journal of Nutrition	2002
Marmonier, C	American Journal of Clinical Nutriti	2002
Rolls, BJ	Physiology and behaviour	2002
Westerterp- Plantenga, M	International Journal of Obesity	2002
Westerterp- Plantenga, M	International Journal of Obesity	2002
Wilson, M	American Journal of Clinical Nutriti	2002
Yeomans,M	Nutritional neuroscience	2002
Alfenas, RCG	Obesity research	2003
Almiron - Roig, E	Physiology and behaviour	2003
Ball, SD	Pediatrics	2003
Barkeling, B	International journal of obesity	2003
Barkeling, B	Obesity research	2003
Doucet, E	Appetite	2003
Feinle,C	American Journal of Physiology	2003
Flint, A	Obesity research	2003
Goedecker, JH	International journal of obesity	2003
Gray, RW	Nutritional neuroscience	2003
Hall, C	British journal of clincal nutrition	2003
Howarth, NC	Journal of nutrition	2003
Kamphuis, M	European journal of clincal nutritio	2003
Kamphuis, M	Physiology and behaviour	2003
Kamphuis, M	British journal of clinical nutrition	2003
Kovacs, E	British journal of clinical nutrition	2003
Raben, A	American journal of clinical nutritic	2003
Sorenson, LB	International journal of obesity	2003
Stratton, RJ	Journal of nutrition	2003
Sturm, K	Journal of clinical endocrinology an	2003

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Tsofliou, F	International journal of obesity	2003
Warren, JM	Paediatrics	2003
Almiron - Roig, E	Physiology and behaviour	2004
Appleton, KM	Journal of human nutrition and die	2004
Archer, BJ	British journal of clinical nutrition	2004
Bellisle, F	Appetite	2004
Burton - Freeman, BM	American journal of clincal nutritio	2004
Caton, SJ	Physiology and behaviour	2004
Chapelot, D	Physiology and behaviour	2004
Cornier, MA	Appetite	2004
Devitt, AA	Appetite	2004
Erdmann, J	Journal of clinical endocrinology an	2004
Farschi, H	International Journal of Obesity an	2004
Latner, JD	International Journal of Eating diso	2004
Leddy, J	Obesity research	2004
Parker, B	European journal of clinical nutritic	2004
Parker, B	Appetite	2004
Rolls, BJ	Journal of the American Dietetic As	2004
Rolls, BJ	Journal of the American Dietetic As	2004
Ryan, M	Clinical nutrition	2004
Sanggaard, KM	British journal of clinical nutrition	2004
Snoek, HM	American journal of clinical nutritic	2004
Sturm, K	American journal of clinical nutritic	2004
Walden, HM	Obesity research	2004
Yeomans, MR	International journal of obesity	2004
Alfenas, RCG	Diabetes care	2005
Berti, C	British journal of clinical nutrition	2005
Burton - Freeman, BM	Journal of nutrition	2005
Caton, SJ	Physiology and behaviour	2005
Chapman, I	Diabetolgia	2005
Drapeau, V	British journal of clinical nutrition	2005
King, NA	British journal of clinical nutrition	2005
Mattes, RD	Physiology and behaviour	2005
Oesch, S	American Journal of Physiology	2005
Robinson, TM	Physiology and behaviour	2005
Vander, J	Journal of the American College of	2005
Westerterp-Plantenga, M. S.	International journal of obesity	2005
Yeomans, MR	Physiology and behaviour	2005
Degen, L	Digestion	2006
Moorhead, SA	British journal of clinical nutrition	2006
Blom, W	American Journal of Clinical Nutriti	2006
Borzoei, S	European journal of clinical nutritic	2006
Bowen, J	Journal of clinical endocrinology an	2006
Bowen, J	Journal of clinical endocrinology an	2006
Cani, PD	European journal of clinical nutritic	2006
Coelho, SB	Nutrition	2006
Erdmann, J	Regulatory peptides	2006
Flint, A	American Journal of Clinical Nutriti	2006
Flood, J	Journal of the American Dietetic As	2006
Iyer, S	Internaional journal of obesity	2006

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Logan, CM	European journal of clincal nutritio	2006
Metallinos - Katsaras, E	Topics in Clinical nutrition	2006
Norton, G	Physiology and behaviour	2006
Oesch, S	Physiology and behaviour	2006
Pilichiewicz, A. N.	American Journal of Physiology	2006
Rolls, BJ	Journal of the American Dietetic As	2006
Tsuchiya, A	Journal of the American Dietetic As	2006
Williamson, DA	Appetite	2006
Akhavan, T	American Journal of Clinical Nutriti	2007
Bellisimo, N	Appetite	2007
Bellisimo, N	Paediatric research	2007
Caton, SJ	Physiology and behaviour	2007
Chapman, I	Obesity	2007
Chaput JP	Appetite	2007
Cotton, JR	Journal of human nutrition and die	2007
Das, SK	American Journal of Clinical Nutriti	2007
Davy, BM	Appetite	2007
Drapeau, V	Appetite	2007
Erdmann, J	European journal of nutrition	2007
Erdmann, J	Regulatory peptides	2007
Harper, A	British journal of clinical nutrition	2007
Hetherington, M	Appetite	2007
Jesudason, DR	British journal of clinical nutrition	2007
Julis, RA	Appetite	2007
Keogh, JB	European journal of clincal nutritio	2007
Martin, CK	Behaviour research and therapy	2007
Martins, C	Journal of endocrinology	2007
Martins, C	British journal of clincal nutrition	2007
Mattes, RD	Physiology and behaviour	2007
Melanson, KJ	Nutrition	2007
Monsivais, P	American Journal of Clinical Nutriti	2007
Moran, L	American Journal of Clinical Nutriti	2007
Mourao, DM	International Journal of Obesity	2007
Pelkman, CL	American Journal of Clinical Nutriti	2007
Poortvliet, P	British journal of clinical nutrition	2007
Samra, R	American Journal of Clinical Nutriti	2007
Sloth, B	American Journal of Physiology	2007
Soenen, S	American Journal of Clinical Nutriti	2007
Sysko, R	International Journal of Eating diso	2007
Van Walleghen, E	Obesity	2007
Andrade, A	Journal of the American Dietetic As	2008
Aston, L	International Journal of Obesity	2008
Bertenshaw, EJ	Physiology and behaviour	2008
Blouin, M	Obesity	2008
Brennan, IM	American Journal of Physiology	2008
Burton - Freeman, BM	Physiology and behaviour	2008
Chearskul, S	American Journal of Clinical Nutriti	2008
Cheskin, L	Appetite	2008
Diepvens, K	International Journal of Obesity	2008
Diepvens, K	Physiology and behaviour	2008

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Doucet, E	Metabolism, clinical and experimer	2008
Feltrin, KL	American Journal of Clinical Nutriti	2008
Ferriday, D	British journal of nutrition	2008
Frecka, JM	American journal of clinical physiol	2008
Gregersen, NT	American Journal of Clinical Nutriti	2008
Harthoorn, LF	Food quality and preference	2008
Hughes, GM	Lipids in health and disease	2008
Isaksson, H	Food and nutrition research	2008
Johnstone, AM	American Journal of Clinical Nutriti	2008
Kawai, K	Eating and weight disorders	2008
Latner, JD	Eating behaviours	2008
Lithander, FE	Lipids in health and disease	2008
Moorhead, SA	British journal of clinical nutrition	2008
Ruijschop, R	British journal of clinical nutrition	2008
Stratton, RJ	American Journal of Clinical Nutriti	2008
Stull, AJ	Journal of the American Dietetic As	2008
Therrien, F	Physiology and behaviour	2008
Zijlstra, N	International journal of obesity	2008
Almiron - Roig, E	Journal of human nutrition and die	2009
Beck, EJ	Molecular nutrition and food resea	2009
Bellisle, F	Appetite	2009
Belza, A	European journal of clinical nutritic	2009
Bertenshaw, EJ	Appetite	2009
Blom, W	Physiology and behaviour	2009
Chevassus, H	European Journal of clinical pharm	2009
Daousi, C	Clinical endocrinology	2009
Dove, ER	American Journal of Clinical Nutriti	2009
Flood - Obaggy, JE	Appetite	2009
Freeland, KR	Appetite	2009
Gatta, B	British Journal of Nutrition	2009
Griifion - Roose,	Journal of nutrition	2009
Hamedani, A	American Journal of Clinical Nutriti	2009
Huda, M	International Journal of Obesity	2009
Juvonen, KR	Journal of nutrition	2009
Karagiozoglou-Lampoudi, T.	Annals of gastroeneterology	2009
King, NA	American Journal of Clinical Nutriti	2009
Lam, S	Physiology and behaviour	2009
Latner, JD	International Journal of Eating diso	2009
Luscombe - Marsh, N	British Journal of Nutrition	2009
Maljaars, J	American Journal of Clinical Nutriti	2009
Mathern, JR	Phytotheraphy research	2009
Mattes, RD	Journal of the American Dietetic As	2009
Misra, M	Obesity	2009
Mourad, C	Diabetes, obesity and metabolism	2009
Nieuwenhuizen, A. G.	British Journal of Nutrition	2009
Parnell, JA	American Journal of Clinical Nutriti	2009
Perrigue, M	Journal of the American Dietetic As	2009
Peters, HP	American Journal of Clinical Nutriti	2009
Ratliff, J	Nutrition research	2009
Reinbach. HC	Clinical research	2009

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Rodriguez, E	Public health nutrition	2009
Rondanelli, M	International journal of obesity	2009
Schmid, S	American Journal of Clinical Nutriti	2009
Schroeder, N	Appetite	2009
Seimon, RV	American Journal of Physiology	2009
Seimon, RV	American Journal of Clinical Nutriti	2009
Ueland, O	Journal of the American Dietetic As	2009
Veldhorst, M	Clinical nutrition	2009
Veldhorst, M	British Journal of Nutrition	2009
Veldhorst, M	Physiology and behaviour	2009
Veldhorst, M	Appetite	2009
Veldhorst, M	European journal of clinical nutritic	2009
Vitaglione, P	Appetite	2009
Vuksan, V	Nutrition, metabolism and cardiova	2009
Wong, CL	Journal of the American College of	2009
Zaveri, S	Journal of human nutrition and die	2009
Zijlstra, N	Physiology and behaviour	2009
Clifton, PM	Australian journal of dairy technolc	2009
Ali, A	American Journal of Clinical Nutriti	2010
Anderson, GH	American Journal of Clinical Nutriti	2010
Anton, SG	Appetite	2010
Asmar, M	American Journal of Physiology	2010
Astbury, NM	British Journal of Nutrition	2010
Boelsma, E	Appetite	2010
Brondel, L	American Journal of Clinical Nutriti	2010
Chang U, J	Appetite	2010
Chapelot, D	British Journal of Nutrition	2010
Chevassus, H	European Journal of clinical pharm	2010
Clegg, M	Appetite	2010
Cornier, MA	Physiology and behaviour	2010
Farajian, P	Eating behaviours	2010
Furchner - Evanson, A	Appetite	2010
Halford, J	Journal of psychopharmacology	2010
Kamiji, M	European journal of clinical nutritic	2010
Karhunen, L	Journal of nutrition	2010
Keogh, J	British Journal of Nutrition	2010
Kristensen, M	Appetite	2010
LaCombe, A	Nutrition journal	2010
Larson - Meyer, DE	Journal of the American College of	2010
Leidy, HJ	International journal of obesity	2010
Lluch, A	Food quality and preference	2010
Martins, C	Journal of clinical endocrinology an	2010
Odunsi, S	Obesity	2010
Pal, S	British Journal of Nutrition	2010
Perrigue, M	Journal of food science	2010
Poppit, SD	Physiology and behaviour	2010
Ranawana, V	Appetite	2010
Ratliff, J	Nutrition research	2010
Reinbach. HC	Food quality and preference	2010
Shomaker, L	American Journal of Clinical Nutriti	2010

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Sivertsen, HK	Food and nutrition research	2010
Strik, C	Nutrition journal	2010
Tai, K	Appetite	2010
Vitaglione, P	Journal of the American College of	2010
Wills, HG	Food and nutrition research	2010
Abou - Samra, R	Nutrition journal	2011
Akhavan, T	International Journal of Obesity	2011
Apolzan, JW	British Journal of Nutrition	2011
Blanchet, R	Appetite	2011
Blatt, AD	Journal of the American Dietetic As	2011
Blatt, AD	American Journal of Clinical Nutriti	2011
Bodinham, C	British Journal of Nutrition	2011
Carter, BE	British Journal of Nutrition	2011
Chan She Ping- Delfos,	Clinical nutrition	2011
Charlton, K	Appetite	2011
Clegg, ME	International journal of food scienc	2011
Clegg, ME	European journal of clinical nutritic	2011
Ford, HE	European journal of clinical nutritic	2011
Geraedts, M	PloS one	2011
Gilbert, JA	British Journal of Nutrition	2011
Hess, JR	Appetite	2011
Hetherington, M	Appetite	2011
Higgs, S	Appetite	2011
Juvonen, KR	Nutrition, metabolism and cardiova	2011
Karl, JP	Physiology and behaviour	2011
Keogh, J	Appetite	2011
Kral, TV	American Journal of Clinical Nutriti	2011
Krog - Mikkelsen, I	Journal of nutrition	2011
Leidy, HJ	British Journal of Nutrition	2011
Lemmens, SG	Nutrition journal	2011
Lemmens, SG	Journal of nutrition	2011
Lemmens, SG	Physiology and behaviour	2011
Makris, A	Obesity	2011
Maljaars, PWJ	British Journal of Nutrition	2011
Mehra, R	Obesity	2011
Mirza, N	International Journal of Pediatric O	2011
Mollard, RC	Applied physiology nutrition and m	2011
Monsivais, P	Appetite	2011
Peters, HP	International Journal of Obesity	2011
Pinelli, N	Journal of Clinical Pharmacology	2011
Pombo - rodriguez, S	International journal of food scienc	2011
Poppit, SD	Appetite	2011
Rosen, LA	Nutrition journal	2011
Smit, HG	European journal of clinical nutritic	2011
Sorenson, J	Nutrition and diabetes	2011
Verhoef, SP	Nutrition and metabolism	2011
Verhoef, SP	British Journal of Nutrition	2011
Willbond, SM	European journal of clinical nutritic	2011
Willis, HJ	Appetite	2011
Yeomans, MR	American Journal of Clinical Nutriti	2011

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Allirot, X	Appetite	2012
Andrade, A	International journal of behavioura	2012
Barone Lumaga, R	Food and function	2012
Brennan, IM	American Journal of Physiology	2012
Brindal, E	European journal of clinical nutritic	2012
Carter, BE	Appetite	2012
Cassady, BA	American Journal of Clinical Nutriti	2012
Chan,YK	Physiology and behaviour	2012
Chungchunlam, SMS	Appetite	2012
Darzi, J	European journal of clinical nutritic	2012
Dougkas, A	British Journal of Nutrition	2012
Finlayson, G	Journal of nutrition	2012
Geliebeter, A	Appetite	2012
Georg Jensen, M	Food chemistry	2012
Hogenkamp, PS	Appetite	2012
Horowitz, M	Diabetes research and clinical prac	2012
Hull, S	Appetite	2012
Ibrugger, S	Appetite	2012
Isakasson, H	Physiology and behaviour	2012
Jensen, MG	Obesity	2012
Karalus, M	Journal of the academy of nutritior	2012
Kissileff, HR	American Journal of Clinical Nutriti	2012
Klingenberg, L	American Journal of Clinical Nutriti	2012
Klosterbuer, AS	journal of agriculture and food che	2012
Lippl, F	Regulatory peptides	2012
Lorensen, J	European journal of clinical nutritic	2012
Maersk, M	European journal of clinical nutritic	2012
Mehta, S	American Journal of Clinical Nutriti	2012
Miernert, L	Appetite	2012
Mollard, RC	British Journal of Nutrition	2012
Nguyen, V	Nutrition journal	2012
Nolan, L	Appetite	2012
Rutters, F	International Journal of Obesity	2012
Schecter, A	American Journal of Physiology	2012
Smit, H	International Journal of Nutrition	2012
Smith, CE	British Journal of Nutrition	2012
Sorenson, J	Clinical nutrition	2012
Tamam, S	Applied physiology nutrition and m	2012
Touyarou, P	Appetite	2012
Wiessing, K	Appetite	2012
Wijlens, A	Obesity	2012
Wilkinson, L	Appetite	2012
Aeberli, I	European journal of nutrition	2013
Allirot, X	Physiology and behaviour	2013
Astbury, N	British Journal of Nutrition	2013
Belza, A	The American Journal of Clinical Nu	2013
Bertenshaw, EJ	British Journal of Nutrition	2013
Bilski, J	Annals of Agricultural and Environr	2013
Brindal, E	British Journal of Nutrition	2013
Buckland, NJ	Appetite	2013

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de Ruyter, DC	PloS one	2013
Douglas, SM	Appetite	2013
Dube, MC	Appetite	2013
Fallaize, R	European journal of nutrition	2013
Flint, A	Journal of diabetes, obesity and me	2013
Geliebeter, A	Annals of Nutrition and Metabolisn	2013
Gibbons, C	The journal of clinical endocrinolog	2013
Gregersen, NT	British Journal of Nutrition	2013
Harrington, DM	Appetite	2013
Harold, JA	Appetite	2013
Higgs, S	Appetite	2013
Hogenkamp, S	Obesity	2013
Houchins, JA	International Journal of Obesity	2013
Karl, JP	Obesity	2013
Kristensen, M	Nutrition, metabolism and cardiova	2013
Leidy, HJ	American Journal of Clinical Nutriti	2013
Lund, MT	European Journal of applied physic	2013
Maffeis, C	European journal of clincal nutritio	2013
Martens, E	American Journal of Clinical Nutriti	2013
Mathes - vliegen, E	Obesity surgery	2013
Mattes, RD	Physiology and behaviour	2013
McNeil, J	European journal of clinical nutritic	2013
Nunez, MF	Applied physiology nutrition and m	2013
Ogden, J	Appetite	2013
Ortinau, L	Nutrition journal	2013
Panhani, S	Appetite	2013
Panhani, S	Appetite	2013
Patel, BP	Journal of food science	2013
Patel, BP	Applied physiology nutrition and m	2013
Penaforte, FR	Nutrition research and practice	2013
Poppit, SD	Journal of the American College of	2013
Ranawana, V	European journal of clinical nutritic	2013
Reis, C	British Journal of Nutrition	2013
Rosenkilde, M	Journal of applied physiology	2013
Ryan, AT	American Journal of Clinical Nutriti	2013
Swoboda, C	Eating behaviours	2013
Wanders, A	British Journal of Nutrition	2013
Wien, M	Nutrition journal	2013
Zafar, T	Nutrition research	2013
Zhu, Y	British Journal of Nutrition	2013
Zhu, Y	International journal of food scienc	2013
Zhu, Y	PloS one	2013
El Khoury, D	Clinical nutrition	2014
Hartvigsen, ML	European journal of nutrition	2014
Vulholm, S	Appetite	2014
Wu, M	European journal of nutrition	2014

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Disease status	Perturbation/ intervention	VAS
healthy	High fat vs high carbohydrate soups	100mm
obese	Fat and carbohydrate infusions	100mm
healthy	Palatability	150mm
healthy	IV amino acids	100mm
type 2 diabetes	GLP - 1	11 point category scal
healthy	GLP - 1	11 point category scal
healthy	High fat vs high carb breakfast	100mm
healthy	ETO	100mm
healthy	Oral fructose and glucose	100mm
healthy	Protein source	100mm
healthy	High protein, high carbohydrate or balanced	120mm
healthy	GLP - 1	100mm - Rodgers and
healthy	Olestra	100mm - Blundell
healthy	Aspartame, fat or carbohydrate consumption	not stated
healthy	Carbohydrate vs fat	100mm
obese	GLP- 1	Not stated
healthy	Water	100mm
obese	Energy density	100mm
healthy	Fat vs carbohydrate meal	100mm
obese	Frequency of eating	100mm
healthy	Frequency of eating	100mm - Hill
healthy	High fat, high carb or high protein	Hill and Blundell
healthy	Nitric Oxide Synthase inhibitors	100mm
healthy	Altitude	100mm
overweight	Aperitif	100mm
healthy	Alcohol + dietary restraint	500mm
healthy	Palatability	500mm
healthy	buffet type meal	100mm - Rolls
healthy	Sibutramine	100mm
healthy	Single test meal	100mm
healthy	Long chain fatty acids	100mm
obese	High fat vs high carbohydrate	100mm
healthy	CCK	10 point scale
healthy	Sugar free vs sugar rich	100mm
healthy	Iso -energetically dense foods	100mm
healthy	Food attributes	13 point category scal
healthy	Degree of saturation of fatty acids	100mm
elderly	Carbohydrate/ fat preloads	150mm - Hulshof
overweight	Hydroxycitric acid	9 point category scale
healthy	Age	100mm
healthy	Volume of food	100mm
healthy	High fat	100mm - Hill
children & elderly	Age	150mm - Hulshof
elderly	Glucose supplementation	100mm
obese	GLP - 1	100mm
healthy	Hunger status	100mm
binge eating disorder	Food presentation	Likert scale
healthy	CMP	100mm - Rodgers, Blu
healthy	Alcohol	150mm

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healthy	Breads	100mm
overweight	linolenic vs oleic acid	100mm
obese	Hydroxycitrate	100mm
overweight	Modified guar gum	100mm
healthy	Bevarage viscosity	9 point category
type 1 diabetes	Acute hyperglycaemia	100mm
overweight	Sensorially distinct foods	66mm - Hill and Blund
healthy	Fat substituted meals	100mm
obese	Weight reduction	Not stated
obese	PEGylated human OB protein	100mm
healthy	Sucrose and safflower preloads	100mm
healthy	Disused fat and carbohydrate preloads	100mm
healthy	Fat content of soups	500mm
healthy	Small intestine nutrient infusion	100mm
healthy	Peanut consumption	9 point category scale
healthy	Carbohydrate	100mm
healthy	Modified fats	100mm - Flint
healthy	Addition of fat or fibre	100mm
healthy	Volume and energy content	100mm
elderly	Dietary carbohydrates and glycaemic response	100mm - Rodgers
overweight	Guar gum	100mm
healthy	Sucrose	100mm
type 2 diabetes	Miglitol	100mm
healthy	Exercise	100mm - Rodgers
healthy	Snack composition	100mm
obese	Volume of liquid food	100mm
overweight	Hydroxycitrate	not stated
healthy	Meal frequency regulation	100mm
elderly	Liquid dietary supplements	100mm
healthy	Alcohol	100mm - Yeomans
healthy	fat sources	9-point scale
healthy	caloric beverages	9-point scale
obese adolescents	GI index	100mm
obese	sibutramine	100mm
obese	vision and eating behaviour	100mm
obese	reduction in body weight	150mm (Hill and Blunc
healthy	duodenal fat infusion	not stated
overweight	dietary fat types	100mm
healthy	orlistat	100mm
healthy	preload volume	not stated
healthy	casein and whey protein	100mm
healthy	fermentable and no fermentable fibre supplen	100mm
overweight	conjugated linoleic acid supplementation	100mm
healthy	6-n-propylthiouracyl sensitivity	100mm
healthy	linoleic acid	100mm
healthy	enterostatin	100mm
healthy	similar energy dense meals rich in fat, carbohy	100mm
healthy	GLP-2	100mm
healthy	short-term continuous enteral tube feeding	100mm
undernourished	under and well-nourishment and age	100mm

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obese	moderate physical activity	100mm
children	low GI breakfasts	not stated
healthy	beverage and solid food	9-point scale
healthy	sweet and non-sweetened lunch	100mm
healthy	fat replacement by inulin or lupin-kernel in sau	150mm
healthy	non food-related environmental stimuli	9-point scale
healthy	fat availability and sex	100mm
healthy	alcohol	100mm
healthy	differentiate meals and snacks	100mm
obese	short-term overfeeding	100mm
healthy	food unit size and energy density	9-point scale
healthy	various test meals	100mm
healthy	irregular and regular meal pattern	100mm
bulimia nervosa and binge eatir	binge eating and satiety	160mm (Hill and Blunc
obese	methylphenidate	100mm
healthy	age	100mm
healthy	age and gender	100mm
healthy	increasing portion size of a sandwich	100mm
healthy	energy density and portion size	100mm
elderly	oral supplements differing in fat and carbohyd	100mm
healthy	whole milk and fermented milk with same fat a	100mm
obese	sensory-specific satiety	150mm
healthy	antral area	100mm
healthy	a new dental approach	100mm
healthy	manipulated palatability	10-point scale
healthy	glycaemic index and load	not stated
healthy	minor cereal and pseudo cereal products	not stated
healthy	preloads varying in fatty acid composition and	100mm
healthy	pleasure and alcohol	100mm
type II diabetes	pramlintide	100mm
healthy	appetite sensations	150mm (Hill and Blunc
healthy	xylitol and polydextrose	150mm (Hill and Blunc
healthy	soup	9-point scale
healthy	protein preload	10-point scale
healthy	palatability	100mm
overweight/obese	eggs	not stated
healthy	capsaicin	100mm
healthy	palatability, learned satiety and energy density	not stated
healthy	IV GLP-1	100mm
healthy	fibre content and physical structure of carrots	100mm
healthy	high-protein breakfast	150mm
healthy	fish and beef protein	100mm
healthy	various dietary proteins	100mm
overweight	different carbohydrate and protein preloads	100mm
healthy	oligofructose	100mm
overweight	peanut oil load	9-point scale
obese	protein and carbohydrate meals	100mm
healthy	glycaemic and insulinemic response	not stated
healthy	beverage portion size	100mm
healthy	peanut oil	9-point scale

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healthy	Olibra fat emulsion	100mm
healthy	GI load of pre exercise meal	100mm
healthy	volume and variety	100mm
healthy	gastric distension	100mm
healthy	load and duration of duodenal lipid	100mm
healthy	larger portion sizes	100mm
healthy	yoghurt, fruit and dairy fruit drink	9-point scale
overweight	mycoprotein, tofu and chicken	100mm
healthy	glucose-to-fructose ratios	not stated
adolescents	short-duration physical activity and ventilation	100mm
adolescents	television viewing at meal time	100mm
healthy	alcoholic drink	100mm
healthy	low-dose Pramlintide	100mm
obese	diet and exercise	150mm (Hill and Blunc
healthy	meals supplemented with either fat or carboh	100mm
overweight	energy-restricted diets	100mm
healthy	sex differences	100mm
obese	appetite sensations and satiety quotient	150mm (Hill and Blunc
healthy	potato, rice and pasta rich meals	100mm
healthy	exercise	100mm
healthy	chocolate milk drink and carbonated beverage	100mm
healthy	chewing gum	100mm
healthy	pancreatic polypeptide	100mm
healthy	sweetened chewing gum	100mm
healthy	high soluble fibre, high amylose barley meals	100mm
healthy	slower eating rates	100mm
healthy	exercise	not stated
healthy	exercise	100mm
overweight	fibre	100mm
healthy	high-fructose corn syrup and sucrose	100mm
healthy	type of sweetener	100mm
overweight, polycystic ovary sy	weight loss	not stated
obese	food form	electronic VAS
overweight/obese	calium-gelled, alginate-pectin beverage	100mm
healthy	healthy meal	150mm (Hill and Blunc
healthy	insoluble cereal fibre	100mm
obese	subcutaneous PYY	100mm
healthy	high-fructose corn syrup, sucrose and milk pre	100mm
binge eating disorder	test meal intake	150mm
healthy	pre-meal water consumption	100mm
healthy	eating slowly	100mm
overweight/obese	reduced GI diet	100mm
healthy	between-meal protein and carbohydrate beve	500mm
second generation antipsychoti	second generation antipsychotics	150mm
healthy	CCK-8	100mm
healthy	glycomacropeptide	100mm
obese	weight loss	100mm
overweight/obese	white button mushrooms substituted for beef	100mm
healthy	proteins and biopeptides	100mm
healthy	novel fat emulsion	100mm

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healthy	standardised meal	150mm (Hill and Blunc
healthy	Intra duodenal infusions of lauric and oleic acic	100mm
healthy	food cues	100mm
obese	habitual meal patterns	not stated
healthy	repeated single meals	100mm
healthy	aroma-texture congruency	100mm
overweight	Korean pine nut oil	100mm
healthy	whole grain rye porridge	100mm
obese	high-protein ketogenic diet	6-point electronic VAS
anorexia nervosa	anorexia nervosa	100mm
binge eating disorder	energy density	160mm
healthy	phosphatidylethanolamine	100mm
healthy	level of carbonation of sugar-sweetened bever	100mm
healthy	retro-nasal aroma	100mm
healthy	bolus tube feeding	6-point VAS
healthy	liquid and solid meal replacement products	100mm
healthy	psychosocial profiles and eating behaviours	Hill and Blundell
healthy	viscosity	10-point scale
healthy	Iso-energetic snacks	70mm
overweight	oat β-glucan	100mm
healthy	dietary restraint and environmental factors	100mm
healthy	caffeine, green tea and tyrosine	100mm
healthy	beverage portion	500mm
obese	Inter-meal interval	150mm
healthy	fenugreek seed extract	not stated
type II diabetes	GIP	100mm
overweight	skin milk compared to a fruit drink	120mm
healthy	fruit in different forms	100mm (Hetherington
healthy	dietary fibre and glycaemic carbohydrate	100mm
healthy	pharmacological modification of fatty acid met	100mm
healthy	sweet and savoury meals	100mm
healthy	high insoluble fibre vs. lowi fibre cereal	100mm
obese and post gastrectomy	ghrelin	100mm
healthy	viscosity of oat bran-enriched beverages	100mm
obese adolescents	Intra-gastric balloon	not stated
overweight/obese	exercise	electronic appetite rat
healthy	whey protein and glycomacropeptide	100mm
binge eating disorder	food volume	160mm
healthy	monosodium glutamate and inosine monopho	100mm
healthy	fat saturation	electronic VAS
obese	fenugreek fibre	100mm
obese	food form and timing of ingestion	100mm
obese adolescent	increased carbohydrate	100mm
type II diabetes	antihyperglycaemic medication	100mm
healthy	α-lactalbumin or gelatin with or with out adde	100mm
overweight/obese	Oligo fructose supplementation	100mm
healthy	added soluble fibre to low energy density liqui	100mm
healthy	β-glucan and fructooligosaccharide	60mm
healthy	carbohydrate restriction with or without additi	100mm
healthy	capsaicin, green tea and CH-19 sweet pepper	100mm

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overweight/obese	hypo energetic diet	100mm
overweight	sublingual spray of natural plant extract	Haber score
healthy	short-term sleep	9-point Likert scale
healthy	whole grain barley/wheat and refined rice-bas	100mm
healthy	Intra duodenal lipid and carbohydrate	100mm
healthy	droplet size of intra duodenal fat emulsions	100mm
healthy	portion size information	100mm (SLIM)
healthy	α-lactalbumin, gelatin and gelatin + tryptophar	100mm
healthy	high and normal casien breakfast	100mm
healthy	whey and casein soy	100mm
healthy	whey protein breakfast vs. whey without GMP	100mm
healthy	high and normal soy protein breakfast	100mm
healthy	β-glucan-enriched bread	100mm
adolescents	viscosity of fibre preloads	100mm
healthy	processing, recipe and variety of pulses	100mm
healthy	cereal bar and almonds	100mm
healthy	viscosity	10-point scale
overweight/obese	GMP	not stated
obese	betahistine hydrochloride	100mm
healthy	digestibility of starches	not stated
obese	stevia, aspartame and sucrose	100mm
healthy	glucose-dependant insulinotropic polypeptide	100mm
healthy	whey protein preload	500mm
healthy	protein-carbohydrate meals	150mm
healthy	acute partial sleep deprivation	100mm
healthy	adding water-rich vegetables to parboiled rice	100mm (Hetherington
healthy	liquid yoghurt and chocolate bars	100mm
overweight	fenugreek seed extract	not stated
healthy	energy and macronutrient composition of brea	150mm
healthy	sex-based differences	100mm
healthy	snack including dried prunes	100mm
healthy	type of snack	100mm 7-point
obese	sibutramine	100mm
gastric/vagotomised patients	gastric/vagotomised patients	100mm
healthy	psyllium fibre enriched meal	100mm
overweight/obese	glycomacropeptide fractions	100mm
healthy	wholegrain vs. refined wheat bread and pasta	100mm
children	breakfasts differing in glycaemic load	5-point scale
healthy	honey vs. sucrose	100mm
adolescents	protein-rich breakfast	100mm
healthy	low-fat dairy product enriched with protein an	100mm
overweight/obese	exercise-induced weight loss	100mm
overweight/obese	alginate	100mm
healthy	protein meals	100mm
healthy	low-viscosity pectin	100mm
healthy	fatty acid chain length	100mm
healthy	caloric beverages	100mm
healthy	consuming eggs for breakfast	100mm
healthy	hot spices	9-point scale
adolescents	eating in the absence of hunger	100mm

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healthy	high protein meal products	100mm
healthy	SFA, MUFA or PUFA	100mm
healthy	nutritional supplementation	100mm
healthy adolescents	barley β-glucan enriched snack	100mm
healthy	increasing doses of fibre	100mm
healthy	different protein sources	100mm
healthy	eating and drinking sugars and whey protein	motivation to eat VAS
healthy	food form in resistance trained and sedentary	13-point scale
neuromedin-β p.P73T mutation	neuromedin-β	150mm
healthy	increasing protein content of meals	not stated
healthy	hidden vegetables	100mm
healthy	whole-grain wheat	100mm
healthy	monosodium glutamate	100mm
healthy	calcium and vitamin D	100mm (Hill & Blundel
healthy	pork, beef and chicken	100mm
healthy	high-fat diet	150mm
healthy	high-fat diet	150mm
healthy	sucralose	100mm
obese	pea protein	100mm
obese	milk supplementation	150mm
healthy	short-chain fructooligosaccharides	100mm
healthy	chewing gum	100mm
healthy	focusing on food	100mm
healthy	semisolid meal enriched in oat bran	100mm
obese	eating rate	9-point Likert scale
healthy	bread-based test meals	7-point VAS
healthy children	eating breakfast compared to skipping breakfa	100mm
healthy	low GI diet	not stated
healthy adolescents	protein-rich beverage at breakfast	100mm
healthy	high protein vs. high carbohydrate meal intake	100mm
healthy	staggered meal consumption	100mm
overweight	stress	100mm
healthy	GI and protein	100mm
healthy	fat	electronic device
obese children	feeding frequency	"Freddy" scale
obese youths	High and low GI meals	not stated
healthy	pulses	100mm
healthy	soluble fibre dextrin	100mm
healthy	protease inhibitor	64mm
healthy	admission time of exenatide	100mm
healthy	eggs	not stated
overweight	whey protein-enriched water	100mm
healthy	cereal breakfasts	100mm
healthy	Fabuless (Olibra)	100mm
healthy	dark and milk chocolate	100mm
healthy	Korean pine nut triacylglycerol	100mm
healthy	oligofructose	100mm
healthy	high protein preloads	150mm (Hill and Blunc
healthy	fibre-matched liquid and solid breakfasts	100mm
healthy	mixed carbohydrate and protein loads	100mm

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healthy	validation of a buffet meal design	70mm
healthy	slow and fast eating rates	100mm
healthy	fruit based and β-glucan beverage	100mm
obese	macronutrients and protein loading	100mm
children	GI load	100mm
overweight	beverages containing soluble fibre, caffeine an	100mm
healthy	beverage consumption	100mm
healthy	Fabuless (Olibra)	100mm
healthy	time interval of preloads	100mm
healthy	propionate-rich sourdough	100mm
healthy	dairy snacks	adaptive VAS software
healthy	savoury or sweet drinks	100mm
obese	cold pressor test	100mm
healthy	alginate based supplements	100mm
healthy	large volume liquid and semi-solid foods	100mm
type 2 diabetes	liraglutide (GLP-1 analogue)	100mm
healthy	polydextrose	64mm
healthy	flaxseed dietary fibre supplements	100mm
healthy	whole grain rye breakfast	100mm
healthy	alignate-based preload	100mm
healthy	fermentable fibres	100mm
obese	leptin injections	150mm
adolescents	sleep restriction	100mm
healthy	resistant starch and pullulan	100mm
healthy	ghrelin infusion	100mm
overweight	milk proteins	100mm
obese	sucrose-sweetened vs. iso-caloric milk drink	100mm
healthy	visual food cues	100mm
healthy	pork proteins at breakfast	100mm
healthy	pulse-containing meal	motivation to eat VAS
healthy	popcorn and potato chips	100mm
healthy	drug use	90mm
healthy	sleep	100mm
healthy	sleep	Likert scale
healthy	lipid emulsion	100mm
healthy	yellow pea protein and fibre	100mm
nutritionally at-risk	food sensory quality	150mm
overweight/obese	glucose drink and exercise	100mm
healthy	fibre-enriched bread	100mm
healthy	single or multi item ad libitum test meal	100mm
healthy	oral and gastric stimulation	100mm
healthy	portion-size selection	100mm
healthy	Altitude	100mm
healthy	Morning eating episodes	70mm
healthy	Polydextrose	500mm??
healthy	protein-induced satiety	100mm
healthy	thickness/creaminess of high-protein drinks	100mm
healthy	Intensity of exercise	100mm
healthy children	glycaemic load	100mm
healthy	diet-congruent foods	100mm

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healthy children	sugar-free vs. sugar-sweetened beverages	5-point scale
healthy	protein yogurt snacks	100mm
type 1/2 diabetes	exercise	150mm (Hill and Blunc
healthy	breakfast meal	3 point PRO-diary wat
type 2 diabetes	GLP-1 (Liraglutide)	100mm
healthy	potatoes and other carbohydrate test meals	100mm
overweight/obese	varying fat and carbohydrate meals	not stated
healthy	mustard, horseradish, black pepper and ginger	100mm
overweight/obese	activity related energy expenditure	100mm
overweight	herb extract and inulin fibre	100mm
healthy	prolonged chewing	100mm
healthy	calorie anticipation	100mm
obese	solid vs. beverage forms of fruit and veg	electronic device
healthy	eating rate and energy density	100mm (SLIM)
healthy	flaxseed dietary fibers	100mm
overweight/obese adolescents	higher-protein breakfast	100mm
healthy	aerobic training	100mm
obese children	exercise	coloured boxes
healthy	high protein breakfast	100mm
obese	Intra-gastric balloon treatment	100mm
obese	chewing	electronic device
overweight/obese	short sleep duration	150mm
healthy	sodium ingestion	100mm
healthy	distraction	5 point Likert scale
healthy	increased dietary protein yoghurt snack	100mm
healthy	caloric beverages	100mm
healthy	familiar beverage intake	4 point VAS
healthy	After school snack of raisins	100mm
children	raisins	100mm
healthy	sugar consumption	100mm
healthy	GMP	100mm
healthy	polydextrose	100mm
type 2 diabetes	peanuts	100mm
overweight	endurance exercise	100mm
healthy	Intra-duodenal fat and protein	100mm
healthy	chewing gum	100mm
healthy	bulking, viscous and gel-forming dietary fibres	100mm
overweight	Hass avocado intake	100mm
healthy	whey protein sweetened beverages	100mm
healthy	masticatory cycles	100mm
healthy	food form	100mm
healthy	food viscosity	100mm
healthy	yoghurt (protein: carb)	100mm
Metabolic syndrome	Concentrated arabinoxylan and β-glucan	100mm
healthy	10% fat sausages w/added wheat or rye bran	100mm
healthy	Low GI and High GI breakfast	100mm

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Sample size	sex	Age
9	Male	21 - 35
11	Male	19 - 26
35	male/female	18-26
6	male/female	22-24
12	Male	53 - 57
16	Male	23-24
14	male/female	20 - 24
24	Male	21-34
8	Male	21-34
9	Male	24.6±2.1
12	Female	18 - 37
10	Male	20 - 29
18	male/female	23-25
10	Male	19-31
10	Male	18-30
8	Male	32-38
29	Female	20 - 45
34	Female	18 - 45
22	male/female	18-40
7	Male	37.4±18.5
8	Male	22-33
16	Male	27.5±9.42
21	Male	18-26
8	Male	23-37
52	male/female	18-50
24	Male	25.7±1.8
50	Male	18-45
14	Male	26 - 48
24	Male	18 - 25
55	Male	25 - 26
10	Male	18 - 35
15	Female	21 - 56
32	Male	21- 33
11	Male	18 - 30
8	Male	20-34
24	male/female	19 - 24
40	male/female	18 - 36
25	male/female	Elderly
106	male/female	18 - 65
10	Male	68–73 + 22 - 30
28	Male	20-33
12	Male	33.2±12.2
87	male/female	(4 ± 6), (18 ± 26) (61 ± 86)
8	male/female	65-84
18	Male	21 - 57
30	male/female	18-65
20	male/female	18 - 65
52	male/female	18 - 35
26	Male	18 - 40

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10	male/female	19 - 39
16	male/female	20 - 56
21	male/female	29 - 57
29	Male	19 - 56
98	male/female	35 - 61
8	male/female	18 - 35
12	Male	39.7±2.9
10	Male	19 - 24
35	Male	18 - 50
30	Male	38 - 52
15	Male	18 - 30
24	Male	22-24
16	Male	18 - 30
26	Male	18-84
15	male/female	24 - 42
14	Male	18 - 30
11	Male	24 - 25
16	male/female	20 - 50
20	Male	23-25
40	male/female	60 - 82
15	Male	35- 53
6	Male	20 - 37
8	Female	42 - 72
23	Male	18 - 40
8	Male	20 - 25
54	Female	18 - 45
20	Male	18 - 31
20	Male	18 - 31
30	male/female	70 +, 20 - 40
18	Male	19 - 34
20	male/female	24.7±7.8
32	male/female	18-35
16	male/female	Dec-18
36	male/female	20-65
18	male/female	46±14
19	male/female	41.9±1
16	Male	21-39
19	Male	20-35
19	Male	21±1.6
18	Male	26±1.3
25	male/female	23.5±2.2
11	male/female	23-46
54	male/female	20-50
36	male/female	31±10
24	Female	26.9±6
12	male/female	34±11
19	male/female	20-30
18	male/female	21-35
6	Male	26±8.3
24	Female	59.8±1.6

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10	Female	50±8.5	
37	male/female		9-Dec
32	male/female	18-35	
24	Female	not stated	
33	Male	37-64	
48	Female	18-50	
15	male/female	20-50	
12	Male	18-35	
24	Male	19-25	
13	male/female	25-45	
26	male/female	18-50	
14	male/female	22.6±0.6	
9	Female	18-42	
18	Female	34.8±9.8	
9	Male	18-40	
45	male/female	18-35	
32	male/female	65-85	
75	male/female	20-45	
42	Female	19-45	
16	male/female	≥65	
8	Male	23.9±2.7	
44	Female	18-65	
24	male/female	21-83	
32	male/female	18-65	
40	Female	24.5±1.9	
39	male/female	24.9±0.8	
51	Male	22.8±2.2	
25	male/female	21-50	
12	Male	18-50	
26	Male	18-70	
51	male/female	20-50	
15	male/female		30.1
31	male/female	18-60	
20	Male	21-43	
20	Male	23.8±1	
30	Female	25-60	
24	male/female	20--30	
16	Male	21.4±0.4	
	male/female		
100	male/female	21-40	
15	Male	18-26	
23	Male	20-32	
72	Male	20-65	
19	Male	41-63	
10	male/female	21-39	
48	male/female	18-50	
30	male/female	37.7±0.48	
28	Male	24.8±0.5	
33	male/female	18-45	
129	male/female	24±4	

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28	male/female	20-55	
12	Female	45-60	
30	male/female	18-60	
24	Male	18-45	
11	Male	25±2	
32	male/female	19-45	
32	male/female	18-35	
42	Female	18-50	
19	Male	18-35	
14	Male		Sep-14
14	Male		Sep-14
11	Male	18-50	
15	Male	18-70	
11	Male	25-45	
28	Male	19-31	
34	male/female	24-42	
24	male/female	21-35	
315	male/female	20-50	
11	Male	24.4±0.3	
14	male/female	24.6±0.7	
20	Male	20-40	
60	male/female	21.7±4	
14	male/female	28.5±1.8	
47	male/female	18-50	
14	Female	20-50	
48	male/female	18-65	
12	male/female	25.9±4.6	
25	male/female	29.8±11.6	
25	male/female	18-55	
13	Female	20-60	
37	male/female	20-29	
28	Female	34.3±5.2	
120	male/female	18-50	
29	Female	20-40	
13	Male	26±4	
31	Male	20-35	
24	Male	39.5±6	
57	male/female	21.5±2.9	
12	Female	18-45	
50	male/female	21-80	
30	Female	22.9±7.1	
19	Female	34-65	
18	Male	18-34	
38	Male	18-65	
10	Male	21-36	
20	male/female	21-50	
12	Male	33-64	
54	male/female	18-65	
39	male/female	18-60	
41	Female	18-30	

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25	Female	50.4±2	
13	Male	20-46	
50	Female	18-62	
21	male/female	18-50	
55	Male	19-36	
32	Female	20-40	
42	Female	33.8±15.6	
	male/female		
17	Male	20-65	
24	Female	23.9±8.7	
30	Female	27±7.8	
18	Male	25±7.5	
30	male/female	20-40	
27	male/female	16-65	
6	Male	33±8.4	
24	male/female	50-80	
78	male/female	25-50	
108	male/female	18-50	
30	male/female	22.1±2.0	
17	male/female	19-45	
40	Female	26.2±1.2	
20	Male	23.7±2.6	
28	Male	18-35	
20	Male	18-57	
12	Male	19-26	
12	Male	27-62	
47	male/female	25-70	
58	Male	18-45	
33	Male	18-35	
8	Male	20-30	
64	male/female	18-35	
32	male/female	20-26	
26	male/female	25-75	
20	male/female	22.6±0.7	
14	male/female	18.5±2.5	
58	male/female	39.6±9.8	
50	male/female	18-40	
30	Female	27±8.24	
22	male/female	18-65	
15	male/female	18-55	
18	male/female	18-65	
40	male/female	18-60	
26	Female		Dec-18
9	Male	61±4	
24	male/female	19-37	
48	male/female	20-70	
38	male/female	18-35	
21	male/female	18-60	
31	Male	40-70	
27	male/female	26.9±6.3	

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57	Female	20-35	
27	Female	25-45	
15	Male	20-40	
47	male/female	18-65	
10	Male	19-47	
10	Male	18-47	
33	male/female	not stated	
24	male/female	18-45	
25	male/female	18-40	
25	male/female	18-40	
25	male/female	18-40	
25	male/female	18-40	
14	male/female	20-29	
31	male/female	15-18	
43	Male	18-35	
45	Male	25-50	
32	male/female	18-50	
20	Male	20-65	
76	Female	18-70	
17	Male	20-30	
19	male/female	18-50	
20	Male	23-29	
50	male/female	19-45	
21	Male	19-57	
12	Male	18-29	
30	Female	20-40	
18	Male	18-25	
39	Male	18-59	
9	Male	25.5±1.6	
43	male/female	25-45	
45	male/female	18-50	
19	Female	25-54	
30	Female	46±12.9	
31	male/female	23-81	
16	male/female	20-34	
20	Male	20-65	
16	male/female	23.4±2.9	
23	male/female		4-Jun
	male/female		
13	male/female	13-17	
121	Female	32.1±6.2	
22	male/female	18-60	
48	male/female	18-65	
30	Male	18-30	
42	male/female	20-45	
18	Male	27.2±9.3	
47	male/female	18-30	
21	Male	20-70	
40	male/female	24.6±2.5	
78	male/female	13-17	

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27	male/female	20-28	
18	Male	18-55	
14	male/female	66-85	
16	male/female	18±0.5	
20	male/female	18-65	
32	Male	20-35	
43	Male	19-28	
24	male/female	≥60	
153	Female	29.9±8.6	
18	Female	20-40	
41	male/female	20-45	
14	male/female	26±1.4	
35	Female	20-40	
11	male/female	20-70	
30	Female	18-50	
10	Male	22.4±4.6	
11	Male	24.7±3.1	
8	male/female	22-27	
20	Male	33±4	
25	Female	20-50	
20	male/female	18-27	
53	Female	18-55	
29	Female	20±2.3	
20	male/female	23.3±0.85	
25	male/female	18-55	
20	male/female	20.1-44.8	
21	male/female		8-Oct
29	Female	20-40	
15	male/female	13-17	
38	male/female	18-51	
38	male/female	24±6	
42	male/female	19-55	
16	male/female	21-54	
15	male/female	18-55	
35	male/female		6-Oct
88	male/female		Jul-15
25	Male	20-30	
36	male/female	20-34	
22	male/female	18-60	
20	male/female	≥18	
31	male/female	37.5±9.9	
46	Female	18-45	
10	male/female	26±1.1	
24	male/female	18-43	
16	Male	26.8±5.6	
39	Female	18-45	
31	male/female	20-60	
10	Male	18-55	
14	Female	18-35	
36	male/female	19-33	

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		14	Male	22-33
		30	Female	18-45
		14	male/female	24-39
		32	Male	21-47
		39	male/female	10-Dec
		77	male/female	18-45
		52	male/female	18-50
		18	Male	18-55
		19	Female	18-40
		12	male/female	25-45
		40	Male	18-50
		30	Female	18-30
		20	Female	35.9±6.2
		8	male/female	20-45
		53	male/female	18-40
		48	male/female	18-65
		34	male/female	18-60
	24&20		male/female	25.7&24.9
		71	male/female	18-60
		20	male/female	18-40
		22	Female	18-40
		10	male/female	33.6±2.8
		21	Male	15-19
		20	male/female	18-60
		20	Male	2±50.4
		17	Male	18-50
		24	male/female	20-50
		23	male/female	18-50
		136	male/female	15-17
		24	Male	20-30
		35	male/female	20-50
		62	male/female	18.68±2.62
		16	Male	18-30
		27	male/female	30-45
		24	male/female	18-47
		20	Male	20-30
		22	male/female	≥18
		36	Male	Sep-14
		38	male/female	20-45
		30	Male	22±5
		26	Male	21±2
		30	male/female	25.4±6.93
		23	male/female	20-60
		20	Male	27.1±1.3
		21	male/female	18-45
		25	Male	19.1-24.8
		26	Male	18-35
		12	Male	28.7±4.1
		40	male/female	10-Dec
		26	Female	18-55

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203	male/female		7-Nov
15	Female	18-50	
16	male/female	>18	
30	Male	18-35	
18	male/female	18-70	
12	male/female	18-50	
16	male/female	45.6±6.2	
22	Male	19-37	
82	male/female	20-35	
58	Female	18-65	
43	male/female	mean 20±2.82	
12	Female	mean 23±1.8	
34	male/female	18-38	
20	male/female	18-55	
18	Male	18-40	
20	Female	15-20	
20	Male	25.5±1	
10	male/female	9±0.9	
79	male/female	18-70	
42	male/female	22-64	
60	male/female	18-50	
75	Male	30-50	
16	Male	20-30	
81	Female	18-40	
32	Female	27±2	
29	male/female	20-30	
29	male/female	20-30	
26	male/female		8-Nov
26	male/female		8-Nov
16	Female	22.4±4.1	
18	Male	29.2±15	
26	Male	18-45	
15	Female	18-50	
16	Male	20-40	
20	Male	18-58	
44	male/female	18-50	
120	male/female	18-50	
26	male/female	25-65	
30	Female	17-28	
21	Male	18-40	
19	Male	18-50	
15	Male	18-40	
20	Male	20-30	
15	male/female	52-72	
28	Male	20-40	
14	Male	18-50	

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