Suggestion for a subdivision of processed meat products on the Danish market based on their content of carcinogenic compounds

Carcinogenic effects in humans are ascribed to processed meat by organisations such as International Agency for Research on Cancer, World Cancer Research Fund and American Institute for Cancer Research. However, the term ‘processed meat’ covers a heterogenic group of products whose content of potential hazards differ considerably. To improve estimates of associations between processed meat intake and cancer risk we investigated ways to divide processed meat into subgroups that more precisely reflects its carcinogenic characteristics. We collected ingredient lists and declarations of salt content for >1000 processed meat products on the Danish market and combined the information with knowledge related to processing parameters. Some compounds that could affect the products’ carcinogenic characteristics, alone or in combination, were evaluated and compared for 12 types of processed meat products, and we suggest subgrouping of processed meat with similar level of carcinogenic potential, which could improve the understanding of the cancer risk associated with processed meat intake in scientific human studies.
Breakfast in Denmark. Prevalence of Consumption, Intake of Foods, Nutrients and Dietary Quality. A Study from the International Breakfast Research Initiative

Breakfast is considered by many to be the most important meal of the day. This study examined the intake of nutrients and foods at breakfast among Danes and the relation to the overall dietary quality. Data were derived from the Danish National Survey on Diet and Physical Activity 2011–2013, a cross-sectional national food consumption study. A total of 3680 participants aged 6–75 years were included in the analyses of breakfast consumption. The Nutrient Rich Food Index 9.3 method was used to examine the overall dietary quality of the diet. The intake of nutrients and foods at breakfast were...
compared across dietary quality score tertiles by ANCOVA adjusted for energy and socio economic status. Breakfast was eaten frequently by children and adults and contributed with 18-20% of total energy intake. Breakfast was relatively high in dietary fibre, B vitamins, calcium and magnesium and low in added sugar, total fat, sodium, vitamin A and D. A decrease in the intake of added sugar, total fat and saturated fat and an increase in the intake of dietary fibre and most micronutrients were seen across tertiles of dietary quality scores. Commonly consumed foods provided at breakfast in Denmark included bread, breakfast cereals and dairy products as well as water, coffee and juice, while intakes of fruits, vegetables, cakes and soft drinks were low.

**General information**

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Organisations: National Food Institute, Division of Risk Assessment and Nutrition, Department of Applied Mathematics and Computer Science, Statistics and Data Analysis
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Scopus rating (2017): CiteScore 4.35 SJR 1.557 SNIP 1.403
Web of Science (2017): Impact factor 4.196
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 4.29 SJR 1.543 SNIP 1.411
Web of Science (2016): Impact factor 3.55
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 4.07 SJR 1.481 SNIP 1.408
Web of Science (2015): Impact factor 3.759
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 3.78 SJR 1.392 SNIP 1.289
Web of Science (2014): Impact factor 3.27
BFI (2013): BFI-level 1
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ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
Scopus rating (2012): CiteScore 2.12 SJR 0.662 SNIP 1.005
Web of Science (2012): Impact factor 2.072
ISI indexed (2012): ISI indexed no
Scopus rating (2011): CiteScore 0.8 SJR 0.29 SNIP 0.369
Web of Science (2011): Impact factor 0.676
ISI indexed (2011): ISI indexed no
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Accuracy of food photographs for quantifying food servings in a lunch meal setting among Danish children and adults

Visual aids, such as food photographs, are widely used in estimating food quantities in dietary surveys. The present study aimed to assess how accurately Danish adults and children can estimate food portion sizes using 37 series of photographs illustrating four to six different portion sizes under real-life conditions; determine whether adults were more accurate than children; and estimate the error caused by using portion size photographs to estimate weights of foods consumed in macronutrient calculation. Six hundred and twenty-two adults and 109 children were recruited in three workplace canteens and in two schools, respectively, to estimate their lunchtime portions based on photographs. Participants were instructed to keep the foods separated on their plate when taking lunch. Participants thereafter estimated their own portions by looking at the relevant series of photographs. The actual food portions were then weighed. The proportion of correct estimations was 42% overall (range 19-77%). The mean difference (%) between estimated and actual weight was 17% (range 1-111%). Small portion size photographs were more often used correctly compared to larger portion photographs. Children had as many correct estimations as adults, although they overestimated portions more. Participants using fractions of (or more than) one photograph to estimate the portion of a food had significantly larger errors. When calculating the macronutrient content of a weekly menu using the estimated portion sizes, protein had the largest error (29%). When used in a real-life situation, the portion size photographs validated in the present study showed a certain inaccuracy compared to the actual weights.

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Web of Science (2017): Impact factor 2.681
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.51 SJR 1.157 SNIP 1.084
Web of Science (2016): Impact factor 2.638
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.17 SJR 0.986 SNIP 0.998
Web of Science (2015): Impact factor 2.583
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 1.9 SJR 0.676 SNIP 1.072
Web of Science (2014): Impact factor 1.987
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.11 SJR 0.939 SNIP 1.188
Web of Science (2013): Impact factor 2.074
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 1.94 SJR 0.854 SNIP 1.003
Web of Science (2012): Impact factor 1.972
Comparison between analyzed and calculated nutrient content of fast foods using two consecutive versions of the Danish food composition databank: FOODCOMP and FRIDA

The objective of this study was to compare the content of selected nutrients of fast foods determined by chemical analysis versus estimated by recipe calculation based on data from two versions of the Danish food composition databank, FOODCOMP and the latest FRIDA. A total of 155 samples of ready-to-eat fast foods were collected from fast food outlets, separated into their components and weighed. Typical components were bread, French fries, vegetables, meat and dressings. The fast foods were analyzed, and energy, protein, saturated fat, iron, thiamin, potassium and sodium contents...
were compared to recipe calculation. When using the FOODCOMP in recipe calculation, the error percentage was largest for saturated fat (28%). When using FRIDA, the error percentage for saturated fat decreased to 11% and was below 15% for all nutrients. The correlations ranged from 0.49 to 0.89 with both databanks. For the individual fast foods, the error percentages were both acceptable (<15%) and large (>50%). Future challenges for the databank in relation to recipe calculation are to include more varieties, a better coverage of foods used as ingredients, and inclusion of analytical values of mixed dishes if they are commonly eaten from fast food outlets.

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Web of Science (2017): Impact factor 2.956
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.15 SJR 1.095 SNIP 1.481
Web of Science (2016): Impact factor 2.752
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.99 SJR 1.123 SNIP 1.613
Web of Science (2015): Impact factor 2.78
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.71 SJR 1.164 SNIP 1.755
Web of Science (2014): Impact factor 1.985
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.8 SJR 1.252 SNIP 1.684
Web of Science (2013): Impact factor 2.259
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.44 SJR 1.102 SNIP 1.55
Web of Science (2012): Impact factor 2.088
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 2.72 SJR 1.304 SNIP 1.636
Web of Science (2011): Impact factor 2.079
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.219 SNIP 1.506
Web of Science (2010): Impact factor 1.948
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.43 SNIP 1.769
Web of Science (2009): Indexed yes
Whole-Grain Intake, Reflected by Dietary Records and Biomarkers, Is Inversely Associated with Circulating Insulin and Other Cardiometabolic Markers in 8- to 11-Year-Old Children

Background: Whole-grain consumption seems to be cardioprotective in adults, but evidence in children is limited. Objective: We investigated whether intakes of total whole grain and dietary fiber as well as specific whole grains were associated with fat mass and cardiometabolic risk profile in children. Methods: We collected cross-sectional data on parental education, puberty, diet by 7-d records, and physical activity by accelerometry and measured anthropometry, fat mass index by dual-energy X-ray absorptiometry, and blood pressure in 713 Danish children aged 8-11 y. Fasting blood samples were obtained and analyzed for alkylresorcinols, biomarkers of whole-grain wheat and rye intake, HDL and LDL cholesterol, triacylglycerols, insulin, and glucose. Linear mixed models included puberty, parental education, physical activity, and intakes of energy, fruit and vegetables, saturated fat, and n-3 (ω-3) polyunsaturated fatty acids. Results: Median (IQR) whole-grain and dietary fiber intakes were 52 g/d (35-72 g/d) and 17 g/d (14-22 g/d), respectively. Fourteen percent of children were overweight or obese and most had low-risk cardiometabolic profiles. Dietary whole-grain and fiber intakes were not associated with fat mass index but were inversely associated with serum insulin [both P <0.01; e.g., with 0.68 pmol/L (95% CI: 0.26, 1.10 pmol/L) lower insulin · g whole grain-1 · MJ-1]. Whole-grain oat intake was inversely associated with fat mass index, systolic blood pressure, and LDL cholesterol (all P <0.05) as well as insulin (P = 0.003), which also tended to be inversely associated with whole-grain rye intake (P = 0.11). Adjustment for fat mass index did not change the associations. The C17-to-C21 alkylresorcinol ratio, reflecting whole-grain rye to wheat intake, was inversely associated with insulin (P <0.001). Conclusions: Higher whole-grain intake was associated with lower serum insulin independently of fat mass in 8- to 11-y-old Danish children. Whole-grain oat intake was linked to an overall protective cardiometabolic profile, and whole-grain rye intake was marginally associated with lower serum insulin. This supports whole grains as healthy dietary components in childhood. This trial was registered at clinicaltrials.gov as NCT01577277.
Ratings:
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Scopus rating (2017): CiteScore 4.24 SJR 2.191 SNIP 1.395
Web of Science (2017): Impact factor 4.398
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 3.93 SJR 2.025 SNIP 1.336
Web of Science (2016): Impact factor 4.145
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): CiteScore 4.08 SJR 2.107 SNIP 1.517
Web of Science (2015): Impact factor 3.74
BFI (2014): BFI-level 2
Scopus rating (2014): CiteScore 4.13 SJR 2.121 SNIP 1.581
Web of Science (2014): Impact factor 3.875
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): CiteScore 4.6 SJR 2.15 SNIP 1.615
Web of Science (2013): Impact factor 4.227
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): CiteScore 4.45 SJR 1.94 SNIP 1.657
Web of Science (2012): Impact factor 4.196
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): CiteScore 4.32 SJR 1.908 SNIP 1.6
Web of Science (2011): Impact factor 3.916
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 2
Scopus rating (2010): SJR 1.729 SNIP 1.569
BFI (2009): BFI-level 2
Scopus rating (2009): SJR 1.572 SNIP 1.542
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 1.592 SNIP 1.41
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 1.599 SNIP 1.477
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 1.724 SNIP 1.565
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 1.534 SNIP 1.399
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 1.443 SNIP 1.459
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 1.414 SNIP 1.569
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 1.422 SNIP 1.544
Associations between school meal-induced dietary changes and metabolic syndrome markers in 8–11-year-old Danish children

Purpose: We recently showed that provision of Nordic school meals rich in fish, vegetables and potatoes and with reduced intakes of fat improved blood pressure, insulin resistance assessed by the homeostatic model (HOMA-IR), and plasma triacylglycerol despite increasing waist circumference in Danish 8–11-year-olds. This study explored whether intake or biomarkers of key dietary components in the schools meals were associated with these metabolic syndrome (MetS) markers during the 6-month intervention. Methods: Data from 7-day dietary records and measurements of whole-blood docosahexaenoic acid (DHA, 22:6n-3), blood pressure, fasting blood MetS markers, waist circumference and android/total fat mass assessed by dual-energy X-ray absorptiometry collected at baseline, 3 and 6 months from 523 children were analyzed in linear mixed-effects models adjusted for puberty, growth and fasting. Results: After adjustment for multiple testing, whole-blood DHA was negatively associated with HOMA-IR (P <0.001) and triacylglycerol (P <0.0001). Potato intake was positively associated with waist circumference (P <0.01), but not with android/total fat mass (P = 0.94). Intakes of whole-grain as well as dietary fiber, protein and fat were not associated with any of the MetS markers. Conclusions: DHA in whole-blood, an indicator of DHA and fish intake, seemed to be the main diet-related predictor of the beneficial effects of the school meals on MetS markers. Increased potato intake was associated with increased waist circumference, but this may not only be due to an increase in abdominal fat, as no association was seen with fat distribution.

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Web of Science (2017): Impact factor 4.423
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.22 SJR 1.328 SNIP 1.158
Web of Science (2016): Impact factor 4.37
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
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Web of Science (2015): Impact factor 3.239
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Contributors: Fagt, S., Biltoft-Jensen, A. P., Sørensen, M. R., Trolle, E., Christensen, T., Matthiessen, J.
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In this paper we investigate how children respond to a new type of school meal and ask whether classmates affect meal evaluations. The study is part of a school meal intervention which tested health effects of the New Nordic Diet. Over two separate three-month periods 834 pupils (age 8–11) from 9 schools (46 classes) were given either meals based on the Nordic diet or their usual packed lunch. The children rated their regular lunch packs and the Nordic meals on a five-point smiley scale when they reported their lunch intake. Ratings were done at home by the child, alone or with the help of a parent. The results show that the classmates influenced children’s ranking of a new type of school meal but did not influence rankings of familiar lunch packs. These results are important not only because they add to our knowledge of the social dimension of liking, but also because they show that we should attend to social mechanisms when implementing new health-promoting food initiatives among children in schools.
Mechanisms behind cancer risks associated with consumption of red and processed meat

General information
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Organisations: National Food Institute, Division of Risk Assessment and Nutrition, Copenhagen Center for Health Technology, Research Group for Gut Microbiology and Immunology
Number of pages: 73
Publication date: 2016

Sleep duration modifies effects of free ad libitum school meals on adiposity and blood pressure

Background: Insufficient sleep can potentially affect both energy intake and energy expenditure resulting in obesity and reduced cardiometabolic health. Objective: To investigate if habitual sleep duration of 8-11-year-olds modifies the effect of free ad libitum school meals on cardiometabolic markers, body composition, dietary intake, and physical activity. Methods: For two consecutive three-month periods this cluster-randomized, controlled, cross-over trial provided 530 children with school meals or usual lunch brought from home. Dietary intake, activity, and sleep were measured simultaneously for seven consecutive days using dietary records and accelerometers. Short and long sleeping children were defined as lower and upper tertile of sleep duration. Body composition, blood pressure, blood lipids, and homeostatic model assessment of insulin resistance (HOMAIR) were measured/calculated. Results: Overall, school meals compared to lunch from home had positive effects on physical activity and blood pressurein long sleeping children and negative effects on body fat in short sleeping children. Short sleeping children increased fat mass compared to long sleeping children by 0.21 (95% CI 0.03;0.38) kg, android fat mass by 0.02 (0.001;0.04) kg, waist circumference by 0.73 (0.23;1.24) cm, blood pressure by 1.5 (0.4;2.6) mmHg, fat intake by 1.1 (0.2;2.0) energy %, and decreased total physical activity by 7.2 (1.6;12.7) % (all P≤0.04), while HOMAIR and blood lipids were not modified by sleep duration (all P≥0.32). Conclusions: The susceptibility to increase abdominal adiposity and blood pressure when exposed to dietary changes can potentially be explained by too little sleep that results in increased caloric intake and reduced physical activity.

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Pages: 33-40
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Socio-economic differences in cardiometabolic risk markers are mediated by diet and body fatness in 8- to 11-year-old Danish children: a cross-sectional study

Objective To explore whether socio-economic differences exist in cardiometabolic risk markers in children and whether lifestyle-related factors potentially mediate these differences. Design Cross-sectional study including measurements of fasting blood lipids, glucose, homeostasis model assessment of insulin resistance (HOMA-IR), blood pressure and heart rate. Potential mediators examined were fat mass index (FMI); intakes of fruit, vegetables, dietary fibre and added sugar; whole-blood n-3 long-chain PUFA (LCPUFA) as a biomarker of fish intake; and physical activity and sedentary time.

Setting Nine primary schools in Denmark. Subjects Children aged 8–11 years (n 715). Results Children of parents with the shortest compared with longest education had higher TAG by 0·12 (95 % CI 0·04, 0·21) mmol/l and HOMA-IR by 0·36 (0·10, 0·62), whereas children of parents with a vocational education had higher total cholesterol by 0·14 (0·02, 0·27) mmol/l and LDL cholesterol by 0·14 (0·03, 0·25) mmol/l compared with children of parents with the longest education; all P<0·05. FMI explained 25 % of the difference in TAG, 64 % of the difference in HOMA-IR and 21–29 % of the differences in cholesterol. FMI and whole-blood n-3 LCPUFA combined explained 42 % of the difference in TAG, whereas FMI, whole-blood n-3 LCPUFA and dietary fibre explained 89 % of the difference in HOMA-IR. Conclusions Socio-economic differences were present in blood lipids and insulin resistance among 8- to 11-year-olds and were mediated by body fatness, whole-blood n-3 LCPUFA and dietary fibre. These lifestyle factors may be targets in public initiatives to reduce socio-economic differences. Confirmation in longitudinal studies and trials is warranted.

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BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.29 SJR 1.122 SNIP 0.982
Web of Science (2017): Impact factor 2.485
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.04 SJR 1.1 SNIP 0.896
Web of Science (2016): Impact factor 2.326
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.82 SJR 1.058 SNIP 1.075
Web of Science (2015): Impact factor 2.433
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.15 SJR 1.134 SNIP 1.086
Web of Science (2014): Impact factor 2.679
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.22 SJR 1.105 SNIP 1.191
Web of Science (2013): Impact factor 2.483
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Objective: Constantly updated food data that reflect the food supply, such as the recently published http://frida.fooddata.dk, is essential for recipe calculation in dietary assessment. The objective of this study was to compare the content of selected nutrients estimated by recipe calculation and chemical analysis of fast food based on data from http://frida.fooddata.dk. Materials and methods: New fast food data in http://frida.fooddata.dk was based on 135 samples of ready to eat fast foods as burgers and sandwiches collected from fast food outlets, separated into their recipe components which were weighed. Typical components were bread, French fries, vegetables, meat, and dressings. The fast foods were analyzed and the content of energy, protein, saturated fat, iron, thiamin, potassium and sodium were compared to recipe calculation. Wilcoxon Signed Rank test, Spearman correlation coefficients and Bland-Altman plots were used for comparing the two methods. Results: Overall there were differences between the chemical and recipe analysis for energy, protein, saturated fat and iron (P<0.01), but not for thiamin, potassium and sodium (P>0.05). The error percentage was largest for saturated fat (28%). Correlations ranged from 0.49 for iron to 0.75 for energy. Bland-Altman plots showed larger differences for higher contents for thiamin and potassium. Results depended on the type of fast food. For burgers (n=36) there was no significant difference for any of the nutrients between the two methods. Meat/French fry mix (n=16) had significant differences (P<0.01) for five out of seven nutrients, and the fast food type with the largest difference between the two methods. Significance: Recipe calculation is a cost-effective alternative to chemical analysis in dietary assessment and nutrient labeling. But recipe calculation can introduce deviations compared to chemical analysis.
The New version of Danish food composition database FRIDA including a case study on recipe calculation compared to a chemical analysis

Objective: Constantly updated food data that reflect the food supply, such as the recently published http://frida.fooddata.dk, is essential for recipe calculation in dietary assessment. The objective of this study was to compare the content of selected nutrients estimated by recipe calculation and chemical analysis of fast food based on data from http://frida.fooddata.dk. Materials and methods: New fast food data in http://frida.fooddata.dk was based on 135 samples of ready to eat fast foods as burgers and sandwiches collected from fast food outlets, separated into their recipe components which were weighed. Typical components were bread, French fries, vegetables, meat, and dressings. The fast foods were analyzed and the content of energy, protein, saturated fat, iron, thiamin, potassium and sodium were compared to recipe calculation. Wilcoxon Signed Rank test, Spearman correlation coefficients and Bland-Altman plots were used for comparing the two methods. Results: Overall there were differences between the chemical and recipe analysis for energy, protein, saturated fat and iron (P<0.01), but not for thiamin, potassium and sodium (P>0.05). The error percentage was largest for saturated fat (28%). Correlations ranged from 0.49 for iron to 0.75 for energy. Bland-Altman plots showed larger differences for higher contents for thiamin and potassium. Results depended on the type of fast food. For burgers (n=36) there was no significant difference for any of the nutrients between the two methods. Meat/French fry mix (n=16) had significant differences (P<0.01) for five out of seven nutrients, and the fast food type with the largest difference between the two methods. Significance: Recipe calculation is a cost-effective alternative to chemical analysis in dietary assessment and nutrient labeling. But recipe calculation can introduce deviations compared to chemical analysis. Future challenges for Frida.fooddata.dk in relation to recipe calculation, could be to include more varieties and better coverage of foods used as ingredients.

Validation of Reported Whole-Grain Intake from a Web-Based Dietary Record against Plasma Alkylresorcinol Concentrations in 8- to 11-Year-Olds Participating in a Randomized Controlled Trial

BACKGROUND: Whole-grain (WG) intake is important for human health, but accurate intake estimation is challenging. Use of a biomarker for WG intake provides a possible way to validate dietary assessment methods. OBJECTIVE: Our aim was to validate WG intake from 2 diets reported by children, using plasma alkylresorcinol (AR) concentrations, and to investigate the 3-mo reproducibility of AR concentrations and reported WG intake. METHODS: AR concentrations were analyzed in fasting blood plasma samples, and WG intake was estimated in a 7-d web-based diary by 750 participants aged 8-11 y in a 2 school meal × 3 mo crossover trial. Reported WG intake and plasma AR concentrations were compared when children ate their usual bread-based lunch (UBL) and when served a hot lunch meal (HLM). Correlations and cross-classification were used to rank subjects according to intake. The intraclass correlation coefficients (ICC)s between subjects' measurements at baseline and after the UBL were used to assess reproducibility. RESULTS:
Correlations between reported WG wheat + rye intake and plasma AR were 0.40 and 0.37 (P <0.001) for the UBL and the HLM diets, and 78% and 77% were classified in the same or adjacent quartiles for the UBL and HLM diets, respectively. The ICC over 3 mo was 0.47 (95% CI: 0.38, 0.55) for plasma total ARs and 0.64 (95% CI: 0.58, 0.70) for reported WG intake. Correlations were higher when using the AR C17:0 homolog as a biomarker, reflecting rye intake instead of plasma total ARs [UBL: r = 0.47; HLM: r = 0.43, P <0.001; ICC = 0.51 (95% CI: 0.43, 0.59)]. CONCLUSIONS: Self-reported WG wheat + rye intake among children showed moderate correlations with plasma AR concentrations. Substantial intraindividual variation was found in WG intake and plasma AR concentrations. The AR homolog C17:0 may be used as a biomarker for WG intake when the WG intake primarily comes from rye as in the present study. This trial was registered at clinicaltrials.gov as NCT01457794.

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Organisations: National Food Institute, Division of Risk Assessment and Nutrition, Department of Applied Mathematics and Computer Science, Statistics and Data Analysis, Research Group for Risk-Benefit, University of Copenhagen, Karolinska Institutet, Swedish University of Agricultural Sciences
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ISSN (Print): 0022-3166
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BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Scopus rating (2017): CiteScore 4.24 SJR 2.191 SNIP 1.395
Web of Science (2017): Impact factor 4.398
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 3.93 SJR 2.025 SNIP 1.336
Web of Science (2016): Impact factor 4.145
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): CiteScore 4.08 SJR 2.107 SNIP 1.517
Web of Science (2015): Impact factor 3.74
BFI (2014): BFI-level 2
Scopus rating (2014): CiteScore 4.13 SJR 2.121 SNIP 1.581
Web of Science (2014): Impact factor 3.875
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): CiteScore 4.6 SJR 2.15 SNIP 1.615
Web of Science (2013): Impact factor 4.227
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): CiteScore 4.45 SJR 1.94 SNIP 1.657
Web of Science (2012): Impact factor 4.196
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): CiteScore 4.32 SJR 1.908 SNIP 1.6
Web of Science (2011): Impact factor 3.916
ISI indexed (2011): ISI indexed yes
Bias in self-reported dietary intake is important when evaluating the effect of dietary interventions, particularly for intervention foods. However, few have investigated this in children, and none have investigated the reporting accuracy of fish intake in children using biomarkers. In a Danish school meal study, 8- to 11-year-old children (n 834) were served the New Nordic Diet (NND) for lunch. The present study examined the accuracy of self-reported intake of signature foods (berries, cabbage, root vegetables, legumes, herbs, potatoes, wild plants, mushrooms, nuts and fish) characterising the NND. Children, assisted by parents, self-reported their diet in a Web-based Dietary Assessment Software for Children during the intervention and control (packed lunch) periods. The reported fish intake by children was compared with their ranking according to fasting whole-blood EPA and DHA concentration and weight percentage using the Spearman correlations and cross-classification. Direct observation of school lunch intake (n 193) was used to score the accuracy of food-reporting as matches, intrusions, omissions and faults. The reporting of all lunch foods had higher percentage of matches compared with the reporting of signature foods in both periods, and the accuracy was higher during the control period compared with the intervention period. Both Spearman's rank correlations and linear mixed models demonstrated positive associations between EPA+DHA and reported fish intake. The direct observations showed that both reported and real intake of signature foods did increase during the intervention period. In conclusion, the self-reported data represented a true increase in the intake of signature foods and can be used to examine dietary intervention effects.
Cost of New Nordic Diet school meals

Purpose - The purpose of this paper is to conduct economic evaluation of a school meal programme based on principles of a New Nordic Diet (NND) by assessing the costs of the NND lunch, compared with packed lunch from home, and investigating potential effects of adjusting the NND principles underlying the school meals on the costs and on the rate of food waste.

Design/methodology/approach - The analysis combines recipes, dietary records and food waste data from a school meal intervention with collected price data within an economic optimization framework.

Findings - A New Nordic School meal programme consisting of a morning snack and a hot lunch based on fixed seasonal menu plans and with 75 per cent organic content is 37 per cent more expensive in terms of ingredient costs than corresponding packed school meals. This cost differential can be almost halved by introducing more flexible scheduling of week plans and reducing the level of organic ambition to 60 per cent. Reducing portion sizes could reduce the cost differential by an extra 5 per cent, which would also reduce food waste by about 15 per cent.

Originality/value - Higher costs and food waste in a restrictive ingredient sourcing school meal programme can be reduced by increased flexibility in meal scheduling, reduction in organic content and reduced average portion size.

General information
State: Published
Organisations: National Food Institute, Division of Nutrition, Department of Management Engineering, Division of Risk Assessment and Nutrition, University of Copenhagen
Contributors: Jensen, J. D., Thorsen, A. V., Damsgaard, C. T., Biltoft-Jensen, A. P.
Number of pages: 15
Pages: 2372-2386
Publication date: 2015
Peer-reviewed: Yes

Publication information
Journal: British Food Journal
Volume: 117
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BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 1.7 SJR 0.5 SNIP 0.872
Danskernes kostvaner 2011-2013

General information
State: Published
Organisations: National Food Institute, Division of Risk Assessment and Nutrition, Research Group for Risk-Benefit, Division of Nutrition
Effects of school meals based on the New Nordic Diet on intake of signature foods: a randomised controlled trial. The OPUS School Meal Study

A New Nordic Diet (NND) was developed in the context of the Danish OPUS Study (Optimal well-being, development and health for Danish children through a healthy New Nordic Diet). Health, gastronomic potential, sustainability and Nordic identity were crucial principles of the NND. The aim of the present study was to investigate the effects of serving NND school meals compared with the usual packed lunches on the dietary intake of NND signature foods. For two 3-month periods, 834 Danish children aged 8-11 years received NND school meals or their usual packed lunches brought from home (control) in random order. The entire diet was recorded over 7 consecutive days using a validated Web-based Dietary Assessment Software for Children. The NND resulted in higher intakes during the entire week (% increase) of root vegetables (116 (95 % CI 1.93, 2.42)), cabbage (26 (95 % CI 1.08, 1.47)), legumes (22 (95 % CI 1.06, 1.40)), herbs (175 (95 % CI 2.36, 3.20)), fresh berries (48 (95 % CI 1.13, 1.94)), nuts and seeds (18 (95 % CI 1.02, 1.38)), lean fish and fish products (47 (95 % CI 1.31, 1.66)), fat fish and fish products (18 (95 % CI 1.02, 1.37)) and potatoes (129 (95 % CI 2.05, 2.56)). Furthermore, there was a decrease in the number of children with zero intakes when their habitual packed lunches were replaced by NND school meals. In conclusion, this study showed that the children increased their intake of NND signature foods, and, furthermore, there was a decrease in the number of children with zero intakes of NND signature foods when their habitual packed lunches were replaced by school meals following the NND principles.
Plate waste and intake of school lunch based on the New Nordic Diet and on packed lunches: A randomised controlled trial in 8- to 11-year-old Danish children

The aim of the present study was to compare total food intake, total and relative edible plate waste and self-reported food likings between school lunch based on the new Nordic diet (NND) and packed lunch from home. In two 3-month periods in a cluster-randomised controlled unblinded cross-over study 3rd- and 4th-grade children (n 187) from two municipal schools received lunch meals based on NND principles and their usual packed lunch (control). Food intake and plate waste (n 1558) were calculated after weighing lunch plates before and after the meal for five consecutive days and self-reported likings (n 905) assessed by a web-based questionnaire. Average food intake was 6 % higher for the NND period compared with the packed lunch period. The quantity of NND intake varied with the menu (P < 0·0001) and was positively associated with self-reported likings. The edible plate waste was 88 (sd 80) g for the NND period and 43 (sd 60) g for the packed lunch period whereas the relative edible plate waste was no different between periods for meals having waste (n 1050). Edible plate waste differed between menus (P < 0·0001), with more waste on soup days (36 %) and vegetarian days (23 %) compared with the packed lunch period. Self-reported likings were negatively associated with percentage plate waste (P < 0·0001). The study suggests that portion sizes need to be considered in new school meal programmes. New strategies with focus on reduction of plate waste, children's likings and nutritious school meals are crucial from both a nutritional, economic and environmental point of view.
Organisations: National Food Institute, Division of Risk Assessment and Nutrition, Division of Nutrition
Contributors: Fagt, S., Krogh Holm, S., Biltoft-Jensen, A. P.
Number of pages: 11
Publication date: 2015
Peer-reviewed: No

Publication information
Journal: E-artikel fra DTU Fødevareinstitutet
Volume: 2015
Issue number: 1
ISSN (Print): 1904-5581
Original language: Danish
Electronic versions:
E_artikel_popul_re_retter.pdf
Source: PublicationPreSubmission
Source-ID: 118883091
Research output: Research › Journal article – Annual report year: 2015

Potentiel effekt af at spise Nøglehulsmærkede produkter; fokus på indtag af næringsstoffer og fuldkorn

General information
State: Published
Organisations: National Food Institute, Division of Risk Assessment and Nutrition
Contributors: Biltoft-Jensen, A. P., Ygil, K. H., Kørup, K., Christensen, T., Fagt, S.
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Publication date: 2015

Publication information
Place of publication: Søborg
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Original language: Danish
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Rapport_potentiel_effekt_af_at_spise_Noeglehulsprodukter.pdf
Research output: Research › Report – Annual report year: 2015

Social ulighed i fedme og fedme-epidemien for børn

General information
State: Published
Organisations: Department of Applied Mathematics and Computer Science, Statistics and Data Analysis, National Food Institute, Division of Nutrition, Technical University of Denmark
Publication date: 2015
Media of output: PowerPoint

Event information
Event: 37th Symposium i Anvendt Statistik 2015
Location: Danmarks Tekniske Universitet, Kongens Lyngby, Denmark
Electronic versions:
Symposium_i_Anvendt_Statistik_2015_ANST.pdf
Research output: Research › Sound/Visual production (digital) – Annual report year: 2015

Social ulighed i fedme og fedme-epidemien for børn; et review

General information
State: Published
Organisations: Department of Applied Mathematics and Computer Science, Statistics and Data Analysis, National Food Institute, Division of Nutrition, Technical University of Denmark
Number of pages: 9
Socioeconomic differences in cardiometabolic risk markers are mediated by diet and fatness in Danish children

General information
State: Published
Organisations: National Food Institute, Division of Risk Assessment and Nutrition, Research Group for Risk-Benefit, University of Copenhagen
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Peer-reviewed: Yes

Publication information
Journal: Annals of Nutrition and Metabolism
Volume: 67
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ISSN (Print): 0250-6807
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.78 SJR 1.317 SNIP 1.057
Web of Science (2017): Impact factor 3.051
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.69 SJR 1.215 SNIP 1.003
Web of Science (2016): Impact factor 2.424
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.55 SJR 1.074 SNIP 1.016
Web of Science (2015): Impact factor 2.461
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.64 SJR 1.294 SNIP 1.096
Web of Science (2014): Impact factor 2.618
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.46 SJR 0.957 SNIP 1.036
Web of Science (2013): Impact factor 2.747
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.35 SJR 0.867 SNIP 0.89
Web of Science (2012): Impact factor 1.661
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 2.38 SJR 0.889 SNIP 0.95
What do Danish children eat, and does the diet meet the recommendations?: Baseline data from the OPUS School Meal Study

A child's diet is an important determinant for later health, growth and development. In Denmark, most children in primary school bring their own packed lunch from home and attend an after-school care institution. The aim of the present study was to evaluate the food, energy and nutrient intake of Danish school children in relation to dietary guidelines and nutrient recommendations, and to assess the food intake during and outside school hours. In total, 834 children from nine public schools located in the eastern part of Denmark were included in this cross-sectional study and 798 children (95·7 %) completed the dietary assessment sufficiently (August-November 2011). The whole diet was recorded during seven consecutive days using the Web-based Dietary Assessment Software for Children (WebDASC). Compared with the food-based dietary guidelines and nutrient recommendations, 85 % of the children consumed excess amounts of red meat, 89 % consumed too much saturated fat, and 56 % consumed too much added sugar. Additionally 35 or 91 % of the children (depending on age group) consumed insufficient amounts of fruits and vegetables, 85 % consumed insufficient amounts of fish, 86 % consumed insufficient amounts of dietary fibre, 60 or 84 % had an insufficient Fe intake (depending on age group), and 96 % had an insufficient vitamin D intake. The study also showed that there is a higher intake of fruits and bread during school hours than outside school hours; this is not the case with, for example, fish and vegetables, and future studies should investigate strategies to increase fish and vegetable intake during school hours.

General information
State: Published
Organisations: National Food Institute, Research Group for Risk-Benefit, Division of Risk Assessment and Nutrition, Department of Applied Mathematics and Computer Science, Statistics and Data Analysis, Division of Nutrition, Department of Management Engineering, University of Copenhagen
Number of pages: 9
Publication date: 2015
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Publication information
Journal: Journal of Nutritional Science
Comparison of a Web-Based Frequency Questionnaire for Assessment of Beverage Intake with a Validated 7-Day Web-Diary from Danish Teenagers

General information
State: Published
Organisations: National Food Institute, Division of Nutrition
Contributors: Biltoft-Jensen, A. P., Iversen, J. D., Christensen, L. M., Matthiessen, J.
Number of pages: 15
Pages: 577-591
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DOIs:
10.9734/EJNFS/2014/9486
Source: FindIt
Source-ID: 270667450
Research output: Research - peer-review › Journal article – Annual report year: 2014

Danish children born to parents with lower levels of education are more likely to become overweight

AIM: Little is known about whether the socio-economic status of parents is linked to their children becoming overweight. This study examined the association between parents’ educational level and overweight Danish children in a nationally representative sample.

METHODS: Body mass index was calculated for a random sample of 512 children aged from four to 14 from the Danish National Survey of Diet and Physical Activity 2005-2008. Their parents provided weight and height data during an interview, together with details of their own educational level. Children were classified as overweight/obese in accordance with the International Obesity Task Force. Frequency estimates of prevalence and logistic regression models were used to correlate childhood overweight/obesity with the mothers’ and fathers’ educational levels as the main outcome measures.
RESULTS:
Danish mothers tended to be more highly educated than fathers and their educational level was inversely associated with their child being overweight, especially if it was a boy. However, the highest educational level of the parents was the only significant educational variable, suggesting that education was associated with overweight children irrespective of the gender of the parent.

CONCLUSION:
Public health initiatives should target parents with low educational levels to prevent, and reduce, social inequality in overweight children.

General information
State: Published
Organisations: National Food Institute, Division of Nutrition, Department of Applied Mathematics and Computer Science, Statistics and Data Analysis
Contributors: Matthiessen, J., Stockmarr, A., Fagt, S., Knudsen, V. K., Biltoft-Jensen, A. P.
Number of pages: 6
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Publication information
Journal: Acta Paediatrica
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BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 1.53 SJR 0.834 SNIP 0.688
Web of Science (2017): Impact factor 2.58
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 1.21 SJR 0.976 SNIP 0.797
Web of Science (2016): Impact factor 2.043
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.32 SJR 1.021 SNIP 1.03
Web of Science (2015): Impact factor 1.647
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 1.59 SJR 0.123 SNIP 0.957
Web of Science (2014): Impact factor 1.674
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 1.95 SJR 0.122 SNIP 1.168
Web of Science (2013): Impact factor 1.842
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 1.83 SJR 0.111 SNIP 1.058
Web of Science (2012): Impact factor 1.974
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 1.81 SJR 0.105 SNIP 0.996
Web of Science (2011): Impact factor 2.073
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.104 SNIP 1.005
Web of Science (2010): Impact factor 1.955
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.682 SNIP 0.926
Dietary effects of introducing school meals based on the New Nordic Diet: a randomised controlled trial in Danish children. The OPUS School Meal Study

The OPUS (Optimal well-being, development and health for Danish children through a healthy New Nordic Diet (NND)) School Meal Study investigated the effects on the intake of foods and nutrients of introducing school meals based on the principles of the NND covering lunch and all snacks during the school day in a cluster-randomised cross-over design. For two 3-month periods, 834 Danish children aged 8-11 years from forty-six school classes at nine schools received NND school meals or their usual packed lunches brought from home (control) in random order. The whole diet of the children was recorded over seven consecutive days using a validated Web-based Dietary Assessment Software for Children. The NND resulted in higher intakes of potatoes (130 %, 95 % CI 2·07, 2·58), fish (48 %, 95 % CI 1·33, 1·65), cheese (25 %, 95 % CI 1·15, 1·36), vegetables (16 %, 95 % CI 1·10, 1·21), eggs (10 %, 95 % CI 1·01, 1·19) and beverages (6 %, 95 % CI 1·02, 1·09), and lower intakes of bread (13 %, 95 % CI 0·84, 0·89) and fats (6 %, 95 % CI 0·90, 0·98) were found among the children during the NND period than in the control period (all, P< 0·05). No difference was found in mean energy intake (P= 0·4), but on average children reported 0·9 % less energy intake from fat and 0·9 % higher energy intake from protein during the NND period than in the control period. For micronutrient intakes, the largest differences were found for vitamin D (42 %, 95 % CI 1·32, 1·53) and iodine (11 %, 95 % CI 1·08, 1·15) due to the higher fish intake. In conclusion, the present study showed that the overall dietary intake at the food and nutrient levels was improved among children aged 8-11 years when their habitual packed lunches were replaced by school meals following the principles of the NND.
Energidrikke i Danmark Undersøgelse af indtaget blandt 10-35-årige

General information
State: Published
Organisations: National Food Institute, Division of Nutrition, Division of Toxicology and Risk Assessment
Contributors: Christensen, L. M., Iversen, J. D., Biltoft-Jensen, A. P., Petersen, M. A., Søndergaard, A. B., Matthiessen, J.
Number of pages: 133
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Publication information
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Energidrikke_i_Danmark_Unders_gelse_af_indtaget_blandt_10_35_rige_.pdf

Research output: Research - peer-review › Journal article – Annual report year: 2014

Ernæringsprofiler til brug ved anprisning af fødevarer, fagligt grundlag

General information
State: Published
Organisations: National Food Institute, Division of Risk Assessment and Nutrition
Contributors: Mejborn, H., Biltoft-Jensen, A. P., Tetens, I.
Number of pages: 14
Publication date: 2014

Publication information
Place of publication: Søborg
Identifying dietary patterns and associated health-related lifestyle factors in the adult Danish population.

Background/objectives: To identify and describe dietary patterns in Danish adults and to examine which demographic and health-related lifestyle factors are associated with dietary patterns.

Subjects/methods: Data derived from the Danish national survey of diet and physical activity collected in 2003-2008 and included 1569 men and 1785 women. Diet was assessed by a 7-day pre-coded food diary. Information on age, gender, weight, height, physical activity, smoking habits, educational level and attitudes towards healthy eating habits was derived from face-to-face interviews. Principal component analysis was applied to explore dietary patterns. Associations with lifestyle factors were examined by means of multiple regression analyses.

Results: Three major dietary patterns were identified: a 'traditional' pattern correlated with intake of rye bread, white bread, fat on bread, cheese, jam, cold meat, minced meat, potatoes and gravy, and cake and biscuits; a 'health-conscious' pattern correlated with coarse bread, fruit, vegetables, low-fat dairy, nuts, water and tea; and a 'fast food' pattern correlated with pizza, hamburger/spring rolls, crisps, rice and pasta, sugar-sweetened soft drinks and sweets. The 'traditional' pattern was positively associated with male gender and age, whereas the 'health-conscious' pattern was positively associated with being female, increasing age and educational level. The 'fast food' pattern was inversely associated with age and smoking.

Conclusions: Three distinct dietary patterns were identified, and associated lifestyle and demographic factors were characterised. The findings are valuable in targeting future nutrition education and will enable more focused strategies in communicating food-based dietary guidelines.

General information
State: Published
Organisations: National Food Institute, Division of Nutrition
Contributors: Knudsen, V. K., Matthiessen, J., Biltoft-Jensen, A. P., Sørensen, M. R., Groth, M. V., Trolle, E., Christensen, T., Fagt, S.
Number of pages: 5
Pages: 736-740
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Journal: European Journal of Clinical Nutrition
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Issue number: 6
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BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.66 SJR 1.249 SNIP 1.062
Web of Science (2017): Impact factor 2.954
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.8 SJR 1.444 SNIP 1.189
Web of Science (2016): Impact factor 3.057
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.86 SJR 1.5 SNIP 1.228
Web of Science (2015): Impact factor 2.935
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.78 SJR 1.561 SNIP 1.174
Web of Science (2014): Impact factor 2.709
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Mange børn og unge får for meget koffein fra energidrikke

General information
State: Published
Organisations: National Food Institute, Division of Nutrition, Division of Toxicology and Risk Assessment, Division of Food Chemistry, Technical University of Denmark
Trends in overweight and obesity in Danish children and adolescents: 2000-2008 – exploring changes according to parental education

Aims: To examine the hypotheses that an overall levelling off in the prevalence of overweight and obesity during the period 2000-2008 has occurred, and that increasing social inequality in overweight and obesity exists in a nationally representative sample of Danish children and adolescents.

Methods: The population comprised a random sample of 1849 children aged 4-14 years who participated in the Danish National Survey of Diet and Physical Activity in 2000-2002, 2003-2004 and 2005-2008. Parental education was chosen as an indicator of children's socioeconomic status. Body mass index (BMI) was calculated from parent-reported weight and height. Subjects were classified as overweight and obese according to the International Obesity Task Force age- and gender-specific BMI cut-off values. Crude prevalence estimates and logistic regression models were used to analyse trends in overweight and obesity as the main outcome measures.

Results: An increase was found in the crude prevalence of overweight (including obesity) in boys (12.8-21.7%, p = 0.0006), but not in girls (17.6-15.9%, p = 0.56), between 2000-2002 and 2005-2008. The prevalence of overweight increased significantly in boys of parents with low educational level only. A strong inverse social gradient in overweight and obesity was documented for boys and girls during the whole survey period.

Conclusions: The present study showed an increase in the prevalence of overweight in Danish boys, but not in girls. This increase was due to increasing social inequality in overweight among boys. Public health initiatives aimed at preventing and reducing overweight and obesity should consider gender difference and especially target boys with parents of low educational level.

General information

State: Published
Organisations: National Food Institute, Division of Nutrition, Department of Applied Mathematics and Computer Science, Statistics and Data Analysis
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Publication information

Volume: 42
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Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 1.58 SJR 0.823 SNIP 0.857
Web of Science (2017): Impact factor 1.646
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 1.34 SJR 0.778 SNIP 0.785
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.72 SJR 0.873 SNIP 1.049
Web of Science (2015): Impact factor 1.318
Web of Science (2015): Indexed yes
WebDASC: a web-based dietary assessment software for 8-11-year-old Danish children

Background: The present study describes the development and formative evaluation of the Web-based Dietary Assessment Software for Children (WebDASC). WebDASC is part of the OPUS project ('Optimal well-being, development and health for Danish children through a healthy New Nordic Diet') and was intended to measure dietary change resulting from a school-based intervention. Methods: WebDASC was developed as a self-administered tool that could be used by 8-11-year-old children with or without parent's aid. The development of WebDASC followed a prototyping approach: focus groups, informal interviews, literature review, and usability tests preceded its release. Special consideration was given to age-appropriate design issues. Results: In WebDASC an animated armadillo guides respondents through six daily eating occasions and helps them report foods and beverages previously consumed. A database of 1300 food items is available either through category browse or free text search, aided by a spell check application. A type-in format is available for foods not otherwise found through category browse or text search. Amount consumed is estimated by selecting the closest portion size among four different digital images. WebDASC includes internal checks for frequently forgotten foods.
and the following features to create motivation: a food-meter displaying cumulative weight of foods reported, a most popular food ranking, and a computer game with a high score list. Conclusions: WebDASC was developed as an intuitive, cost-effective, and engaging method to collect detailed dietary data from 8- to 11-year-old children. Preliminary testing demonstrated that it was well accepted among children.

**General information**
State: Published
Organisations: National Food Institute, Division of Nutrition, Baylor College of Medicine, University of Oslo, Serious Games Interactive ApS
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Publication date: 2014
Peer-reviewed: Yes

**Publication information**
Journal: Journal of Human Nutrition and Dietetics
Volume: 27
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Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.86 SJR 1.157 SNIP 1.099
Web of Science (2017): Impact factor 2.681
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.51 SJR 1.157 SNIP 1.084
Web of Science (2016): Impact factor 2.638
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.17 SJR 0.988 SNIP 0.998
Web of Science (2015): Impact factor 2.583
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 1.9 SJR 0.676 SNIP 1.072
Web of Science (2014): Impact factor 1.987
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.11 SJR 0.939 SNIP 1.188
Web of Science (2013): Impact factor 2.074
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 1.94 SJR 0.854 SNIP 1.003
Web of Science (2012): Impact factor 1.972
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 1.63 SJR 0.734 SNIP 0.78
Web of Science (2011): Impact factor 1.738
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.73 SNIP 1.05
Web of Science (2010): Impact factor 1.789
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.679 SNIP 0.874
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.731 SNIP 0.828
A school meal study: comparing plate waste and likings of packed lunch and school lunch based on the New Nordic Diet

Background and objectives: The majority of Danish children do not eat in accordance with the national dietary guidelines. The OPUS School Meal Study is a school-based intervention study testing the health effects of the New Nordic Diet (NND). The aim of this sub-study was to compare edible plate waste and self-reported likings between packed lunch from home and the served NND meal.

Methods: The OPUS School Meal study is a cluster-randomized controlled 2-period cross-over study consisting of two three-month periods: an intervention period (NND) and a control period. 187 children (8-11y) at two schools were assigned to the food waste sub-study. Edible plate waste was measured by weighing individually the meal for 5 consecutive days before and after lunch at the end of each dietary period. Self-reported smiley ratings from a web-based dietary assessment software for children were compared to edible plate waste. Data were statistical modelled in two steps, a generalised linear mixed model was fitted for the probability of waste/no waste, and secondly a model for positive waste data was fitted.

Results: 74% of all meals (N=1558) had edible plate waste (>5g). Looking at all lunches the odds for leaving edible plate waste was 11 times higher for NND than for packed lunch (P < 0.001). Looking at the meals (N=1060) with edible plate waste the amount was not significantly different between meal types; the median (IQR) for NND was 85.0 (36.5; 150.0) and the median (IQR) for packed lunch 70.0 (40.0; 119.0). Lunches rated as ‘really bad’ or ‘bad’ in the self-reported likings had more waste than lunches rated ‘really good’ (P < 0.001).

Conclusions: The odds of having edible plate waste were significantly higher for NND meals compared to packed lunch. Liking of school meals are a significant determinant in order to reduce edible plate waste.

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Event: Poster session presented at IUNS 20th International Congress of Nutrition, Granada, Spain.
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Research output: Research - peer-review; Journal article – Annual report year: 2012
assessments software for children were compared to edible plate waste. Data were statistically modelled in two steps, a
generalised linear mixed model was fitted for the probability of waste/no waste, and secondly a model for positive waste
data was fitted.

Results: 74% of all meals (N=1558) had edible plate waste (>5g). Looking at all lunches the odds for leaving edible plate
waste was 11 times higher for NND than for packed lunch (P < 0.001). Looking at the meals (N=1060) with edible plate
waste the amount was not significantly different between meal types; the median (IQR) for NND was 85.0 (36.5; 150.0)
and the median (IQR) for packed lunch 70.0 (40.0; 119.0). Lunches rated as ‘really bad’ or ‘bad’ in the self-reported likings
had more waste than lunches rated ‘really good’ (P < 0.001).

Conclusions: The odds of having edible plate waste were significantly higher for NND meals compared to packed lunch.
Liking of school meals are a significant determinant in order to reduce edible plate waste.

General information
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Organisations: National Food Institute, Division of Nutrition, Department of Applied Mathematics and Computer Science,
University of Copenhagen
Contributors: Thorsen, A. V., Lassen, A. D., Christensen, L. M., Biltoft-Jensen, A. P., Andersen, R., Damsgaard, C. T.,
Petersen, R. A., Tetens, I.
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Publication date: 2013
Peer-reviewed: Yes
Comparing plate waste and likings of packed lunch and school lunch based on the New Nordic Diet

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Organisations: National Food Institute, Division of Nutrition, Department of Applied Mathematics and Computer Science, University of Copenhagen
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Peer-reviewed: Yes
Event: Poster session presented at IUNS 20th International Congress of Nutrition, Granada, Spain.
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Research output: Research - peer-review > Conference abstract in journal – Annual report year: 2013

Comparison of estimated energy intake in children using a Web-based Dietary Assessment Software with accelerometer-estimated energy expenditure in children

Background
The OPUS (Optimal well-being, development and health for Danish children through a healthy New Nordic Diet) project carried out a school meal study to assess the impact of a New Nordic Diet (NND). The random controlled trial involved 834 children aged 8–11 in nine local authority schools in Denmark. Dietary assessment was carried out using a program known as WebDASC (Web-based Dietary Assessment Software for Children) to collect data from the children.

Objective
To compare the energy intake (EI) of schoolchildren aged 8–11 estimated using the WebDASC system against the total energy expenditure (TEE) as derived from accelerometers worn by the children during the same period. A second objective was to evaluate the WebDASC’s usability.

Design
Eighty-one schoolchildren took part in what was the pilot study for the OPUS project, and they recorded their total diet using WebDASC and wore an accelerometer for two periods of seven consecutive days: at baseline, when they ate their usual packed lunches and at intervention when they were served the NND. EI was estimated using WebDASC, and TEE was calculated from accelerometer-derived activity energy expenditure, basal metabolic rate, and diet-induced thermogenesis. WebDASC’s usability was assessed using a questionnaire. Parents could help their children record their diet and answer the questionnaire.
Results
Evaluated against TEE as derived from the accelerometers worn at the same time, the WebDASC performed just as well as other traditional methods of collecting dietary data and proved both effective and acceptable with children aged 8–11, even with perhaps less familiar foods of the NND.

Conclusions
WebDASC is a useful method that provided a reasonably accurate measure of EI at group level when compared to TEE derived from accelerometer-determined physical activity in children. WebDASC will benefit future research in this area.

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Organisations: National Food Institute, Division of Nutrition, Department of Applied Mathematics and Computer Science, Statistics and Data Analysis
Contributors: Biltoft-Jensen, A. P., Hjort, M. F., Trolle, E., Christensen, T., Brockhoff, P. B., Andersen, L. F., Tetens, I., Matthiessen, J.
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BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.28 SJR 0.823 SNIP 0.779
Web of Science (2017): Impact factor 2.086
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.24 SJR 0.906 SNIP 0.768
Web of Science (2016): Impact factor 2.039
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.19 SJR 1.024 SNIP 0.911
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.37 SJR 1.03 SNIP 0.918
Web of Science (2014): Impact factor 2.162
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 1.82 SJR 0.753 SNIP 0.817
Web of Science (2013): Impact factor 1.785
ISI indexed (2013): ISI indexed no
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 1.45 SJR 0.721 SNIP 0.64
ISI indexed (2012): ISI indexed no
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 0 SJR 0.862 SNIP 1.03
ISI indexed (2011): ISI indexed no
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.987 SNIP 0.893
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.323 SNIP 0.217
BFI (2008): BFI-level 1
Scopus rating (2003): SJR 0.103 SNIP 0
Dietary composition and nutrient content of the New Nordic Diet

Objective To describe the dietary composition of the New Nordic Diet (NND) and to compare it with the Nordic Nutrition Recommendations (NNR)/Danish Food-based Dietary Guidelines (DFDG) and with the average Danish diet. Design Dietary components with clear health-promoting properties included in the DFDG were included in the NND in amounts at least equivalent to those prescribed by the DFDG. The quantities of the other dietary components in the NND were based on scientific arguments for their potential health-promoting properties together with considerations of acceptability, toxicological concerns, availability and the environment. Calculations were conducted for quantifying the dietary and nutrient composition of the NND. Setting Denmark. Subjects None. Results The NND is characterized by a high content of fruits and vegetables (especially berries, cabbages, root vegetables and legumes), fresh herbs, potatoes, plants and mushrooms from the wild countryside, whole grains, nuts, fish and shellfish, seaweed, free-range livestock (including pigs and poultry) and game. Overall, the average daily intakes of macro- and micronutrients in the NND meet the NNR with small adjustments based on evidence of their health-promoting properties. Conclusions The NND is a prototype regional diet that takes palatability, health, food culture and the environment into consideration. Regionally appropriate healthy diets could be created on similar principles anywhere in the world.
Dietary patterns and associated health-related lifestyle factors in Denmark

Original language: English
Keywords: Health, Diet, Nordic, OPUS

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Dietary patterns and associated health-related lifestyle factors in Denmark

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Contributors: Knudsen, V. K., Biltoft-Jensen, A. P., Matthiessen, J., Sørensen, M. R., Groth, M. V., Trolle, E., Christensen, T., Fagt, S.
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n-3 PUFA status in school children is associated with beneficial lipid profile, reduced physical activity and increased blood pressure in boys

Dietary n-3 long-chain PUFA (LC-PUFA) improve dyslipidaemia and hypertension and may affect insulin resistance and adiposity. Increasing numbers of children show signs of the metabolic syndrome (MetS), but few studies have investigated the association with n-3 LC-PUFA status. We examined the relationship between fasting whole-blood EPA or DHA (w/w% of the total fatty acids, FA%) and markers of the MetS (anthropometry, blood pressure, plasma lipids and glucose homeostasis) cross-sectionally in seventy-three 8–11-year-old Danish children from the OPUS School Meal Pilot Study (OPUS is an acronym of the project ‘Optimal well-being, development and health for Danish children through a healthy New Nordic Diet’ and is supported by a grant from the Nordea Foundation). Also, we explored the potential mediating effects of physical activity and energy intake. Girls had higher body fat percentage (BF%), diastolic blood pressure, heart rate, plasma TAG, insulin, homeostasis model assessment-insulin resistance and glycosylated Hb than boys. Sexes did not differ in fish or macronutrient intake or whole-blood fatty acids. After adjustment for sex, age and total whole-blood fatty acid concentration, BF% and HDL:TAG increased with whole-blood EPA (β=0.25, P<0.05), and HDL increased 0.35 (sem 0.13) mmol/l per FA% EPA increase (β = 0.30, P= 0.008). Unexpectedly, DHA was positively associated with mean arterial pressure in boys (6·3 (sem 1·7) mmHg/FA% DHA increase, β = 0·62, P= 0·001) and reduced physical activity in both sexes (− 44 (sem 19) counts/min per FA%, β = − 0·22, P= 0·024). The associations with blood pressure and HDL remained after adjustment for physical activity, BF% and energy intake. The present study confirmed the beneficial association between n-3 LC-PUFA status and lipid profile seen in adults, but showed unexpected relationships with physical activity, BF% and blood pressure. This is the third time we have observed such tendencies in Danish children.

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BFI (2018): BFI-level 1
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Scopus rating (2017): CiteScore 3.65 SJR 1.756 SNIP 1.555
Evaluation of Web-based Dietary Assessment Software for Children: comparing reported fruit, juice and vegetable intakes with plasma carotenoid concentration and school lunch observations

Web-based Dietary Assessment Software for Children (WebDASC) was developed to estimate dietary intake in a school meal intervention study among 8- to 11-year-old Danish children. The present study validates self-reported fruit, juice and vegetable (FJV) intakes in 8- to 11-year-old children by comparing intake with plasma carotenoid concentration, and by comparing the reported FJV intake to actually eaten FJV, as observed by a photographic method. A total of eighty-one children, assisted by parents, reported their diet for seven consecutive days. For the same five schooldays as they reported their diet, the children's school lunch was photographed and weighed before and after eating. In the week after the diet reporting, fasting blood samples were taken. Self-reported intake of FJV and estimated intake of carotenoids were compared with plasma carotenoid concentration. Accuracy of self-reported food and FJV consumption at school lunch was measured in terms of matches, intrusion, omission and faults, when compared with images and weights of lunch intake. Self-reported intake of FJV was significantly correlated with the total carotenoid concentration (0·58) (P < 0·01). Fruit and juice consumption showed higher correlations than vegetables with plasma carotenoid concentration (0·38 and 0·42 v. 0·33) (P < 0·01). A total of 82 % of the participants fell into the same or adjacent quartiles when cross-classified by FJV intake and carotenoids biomarkers. WebDASC attained 82 % reporting matches overall and a higher percentage match for reporting fruits compared with beverages. The present study indicated that WebDASC can be used to rank 8- to 11-year-old Danish children according to their intake of FJV overall and at school meals.

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Scopus rating (2017): CiteScore 3.65 SJR 1.756 SNIP 1.555
Web of Science (2017): Impact factor 4.586
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.46 SJR 2.055 SNIP 1.535
Web of Science (2016): Impact factor 4.844
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 3.52 SJR 1.583 SNIP 1.442
Web of Science (2015): Impact factor 4.051
Web of Science (2015): Indexed yes
Increasing social inequality in overweight in Danish boys

General information
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Number of pages: 1
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Poster child overweight Gent ISBNPA 2013.pdf
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Misperception of body weight among overweight Danish adults: trends from 1995 to 2008
OBJECTIVE: To examine changes in the prevalence of overweight and weight misperception among overweight Danes from 1995 to 2008, and to identify factors associated with weight misperception.

DESIGN: Cross-sectional studies, in which data on self-reported weight, height and self-perception of overweight status were obtained through face-to-face interviews. 'Overweight' includes obesity. Weight misperception was defined as overweight individuals who did not perceive themselves as overweight. The χ² test was used to analyse changes over time and multiple logistic regression analysis was applied to identify factors associated with weight misperception.


SUBJECTS: A random sample of 9623 Danes aged 15-75 years.

RESULTS: The prevalence of overweight increased in men and women from 1995 to 2005-2008 (from 35·1 % to 43·0 %, P < 0·001). Concurrently, there was a reduction in the proportion of overweight men (from 77·5 % to 71·4 %, P = 0·001) and women (from 54·8 % to 51·9 %, P = 0·24) who misperceived their weight. Factors associated with weight misperception were 'never intend to eat healthily' (men), high levels of leisure-time physical activity, 'very good/excellent' self-rated health and survey year (higher misperception in 2000-2004 than 2005-2008; P < 0·05).

CONCLUSIONS: The increase in overweight from 1995 to 2005-2008 was accompanied by a reduction in the proportion of overweight men misperceiving their weight. This may indicate that more men see overweight as a personally relevant health problem. Our findings also suggest that overweight individuals who are more physically active and have better self-rated health may not consider their excess weight a health problem.
Relationship between sleep duration and dietary intake in 4- to 14-year-old Danish children

A negative association between sleep duration and BMI has been observed in children. However, knowledge about the association between sleep duration and diet is limited. The objective was to examine the association between sleep duration and intake of foods and nutrients in children. In the present crosssectional study, dietary intake and sleep duration were recorded by the parents for seven consecutive days in a food and sleep record in a representative sample of 802 4- to 14-year-old children. No sex differences were found regarding age and sleep duration. Sleep duration was negatively correlated to age (ρ = –0·68; P < 0·001) and BMI (ρ = –0·41; P < 0·001). In multiple linear regression analyses, sleep duration was not associated with energy intake (b = –0·015; P = 0·20), but there was a trend towards a positive association with intake of dietary fibre (b = 0·006; P = 0·05) and vegetables (b = 0·011; P = 0·05), and a negative association with intake of poultry (b = –0·002; P = 0·02), and a trend towards a negative association with intake of liquid ‘discretionary calories’ (b = –0·01; P = 0·05). Furthermore, in a comparison of dietary intake between age-dependent tertiles of sleep duration, only intake of liquid ‘discretionary calories’ was significantly lower in long sleepers than in short and medium sleepers (P= 0·03). In conclusion, sleep duration was not associated with energy intake and the proposal that children with short sleep duration have less healthy eating habits than children with longer sleep duration was only weakly supported by the present findings.

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Organisations: National Food Institute, Division of Nutrition, Children's Hospital of Eastern Ontario Research Institut
Contributors: Hoppe, C., Rothausen, B. W., Biltoft-Jensen, A. P., Matthiessen, J., Groth, M. V., Chaput, J., Tetens, I.
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Scopus rating (2017): CiteScore 2.44 SJR 0.984 SNIP 0.822
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 0.72 SJR 0.62 SNIP 0.545
Web of Science (2016): Indexed yes
Scopus rating (2015): SJR 0.381 SNIP 0.376
Web of Science (2015): Indexed yes
Scopus rating (2014): SJR 0.204 SNIP 0.521
Scopus rating (2013): SJR 0.246 SNIP 0.224
ISI indexed (2013): ISI indexed no
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The dietary effect of serving school meals based on the new Nordic diet – A randomised controlled trial in Danish children

Background and objectives:
The OPUS study is a school-based intervention study testing selected health effects of New Nordic Diet (NND). Children are served lunch and snacks based on NND. The hypothesis is that Danish school children eat a healthier diet when receiving NND school meals as compared with packed lunch brought from home. To investigate the effects on intake of selected macronutrients in Danish school children when served school meals based on NND compared with packed lunch.

Methods:
In a cluster-randomized controlled unblinded cross-over study children received school meals based on NND for 3 months and their usual packed lunch for 3 months. The daily intake of food and beverages was recorded 3 times during 7 consecutive days using a validated self-administered web-based dietary assessment software tool for children. Statistical analysis was performed by hierarchical mixed models.

Results:
834 children from 9 schools were included and 96%, 89% and 80% filled out the first, second and third dietary assessment sufficiently (4-7 days), respectively. The preliminary results showed that the effect of serving NND resulted in a reduction in fat E% (P<0.0001), total fat (P=0.0007) and saturated fat (P<0.0001) intake for the NND compared to packed lunch; and an increase in protein E% (P<0.0001), and a borderline significant increase in dietary fiber intake (P=0.0471). There was no effect for energy intake, carbohydrate E% and added sugar E% (P>0.05). Effects are adjusted for BMI, season and household education.

Conclusions:
Danish school children’s dietary intake of total and saturated fat decreased, fat E% decreased and protein E% increased when eating NND lunch and snacks compared to packed lunch brought from home. The OPUS project (Optimal well-being, development and health for Danish children through a healthy New Nordic Diet) is supported by the Nordea Foundation.

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Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.78 SJR 1.317 SNIP 1.057
Web of Science (2017): Impact factor 3.051
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.69 SJR 1.215 SNIP 1.003
Web of Science (2016): Impact factor 2.424
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.55 SJR 1.074 SNIP 1.016
Web of Science (2015): Impact factor 2.461
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.64 SJR 1.294 SNIP 1.096
Web of Science (2014): Impact factor 2.618
WebDASC: a web-based dietary assessment software for 8-11-year-old Danish children

Background: The present study describes the development and formative evaluation of the Web-based Dietary Assessment Software for Children (WebDASC). WebDASC is part of the OPUS project ('Optimal well-being, development and health for Danish children through a healthy New Nordic Diet') and was intended to measure dietary change resulting from a school-based intervention. Methods: WebDASC was developed as a self-administered tool that could be used by 8-11-year-old children with or without parent's aid. The development of WebDASC followed a prototyping approach: focus groups, informal interviews, literature review, and usability tests preceded its release. Special consideration was given to age-appropriate design issues. Results: In WebDASC an animated armadillo guides respondents through six daily eating occasions and helps them report foods and beverages previously consumed. A database of 1300 food items is available either through category browse or free text search, aided by a spell check application. A type-in format is available for foods not otherwise found through category browse or text search. Amount consumed is estimated by selecting the closest portion size among four different digital images. WebDASC includes internal checks for frequently forgotten foods, and the following features to create motivation: a food-meter displaying cumulative weight of foods reported, a most popular food ranking, and a computer game with a high score list. Conclusions: WebDASC was developed as an intuitive, cost-effective, and engaging method to collect detailed dietary data from 8- to 11-year-old children. Preliminary testing demonstrated that it was well accepted among children.

General information
State: Published
Organisations: National Food Institute, Division of Nutrition, Baylor College of Medicine, University of Oslo, Serious Games Interactive ApS
WebDASC: a web-based dietary assessment software for 8-11-year-old Danish children

Background: The present study describes the development and formative evaluation of the Web-based Dietary Assessment Software for Children (WebDASC). WebDASC is part of the OPUS project ('Optimal well-being, development and health for Danish children through a healthy New Nordic Diet') and was intended to measure dietary change resulting from a school-based intervention. Methods: WebDASC was developed as a self-administered tool that could be used by 8-11-year-old children with or without parent's aid. The development of WebDASC followed a prototyping approach: focus groups, informal interviews, literature review, and usability tests preceded its release. Special consideration was given to age-appropriate design issues. Results: In WebDASC an animated armadillo guides respondents through six daily eating occasions and helps them report foods and beverages previously consumed. A database of 1300 food items is available either through category browse or free text search, aided by a spell check application. A type-in format is available for foods not otherwise found through category browse or text search. Amount consumed is estimated by selecting the closest portion size among four different digital images. WebDASC includes internal checks for frequently forgotten foods, and the following features to create motivation: a food-meter displaying cumulative weight of foods reported, a most popular food ranking, and a computer game with a high score list. Conclusions: WebDASC was developed as an intuitive, cost-effective, and engaging method to collect detailed dietary data from 8- to 11-year-old children. Preliminary testing demonstrated that it was well accepted among children.

A description of OPUS School Meal Study: a comprehensive randomized controlled trial assessing the impact of serving school meals based on New Nordic Diet

Introduction: Danish children consume too much sugar and not enough whole grain, fish, fruit, and vegetables. The Nordic region is rich in such foods with a strong health-promoting potential. We lack randomised controlled trials that investigate the developmental and health impact of serving school meals based on Nordic foods. Aim: This paper describes the rationale, design, study population, and potential implications of the Optimal well-being, development and health for Danish children through a healthy New Nordic Diet (OPUS) School Meal Study. Methods: In a cluster-randomised cross-over design, 1021 children from 3rd and 4th grades (8–11 years old) at nine Danish municipal schools were invited to
participate. Classes were assigned to two 3-month periods with free school meals based on the New Nordic Diet (NND) or their usual packed lunch (control). Dietary intake, nutrient status, physical activity, cardiorespiratory fitness, sleep, growth, body composition, early metabolic and cardiovascular risk markers, illness, absence from school, wellbeing, cognitive function, social and cultural features, food acceptance, waste, and cost were assessed. Results: In total, 834 children (82% of those invited) participated. Although their parents were slightly better educated than the background population, children from various socioeconomic backgrounds were included. The proportion of overweight and obese children (14%) resembled that of earlier examinations of Danish school children. Drop out was 8.3%. Conclusions: A high inclusion rate and low drop out rate was achieved. This study will be the first to determine whether school meals based on the NND improve children’s diet, health, growth, cognitive performance, and early disease risk markers.

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BFI (2018): BFI-level 1
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BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 1.58 SJR 0.823 SNIP 0.857
Web of Science (2017): Impact factor 1.646
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 1.34 SJR 0.778 SNIP 0.785
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.72 SJR 0.873 SNIP 1.049
Web of Science (2015): Impact factor 1.318
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 3.47 SJR 2.319 SNIP 1.666
Web of Science (2014): Impact factor 1.832
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.82 SJR 1.715 SNIP 1.374
Web of Science (2013): Impact factor 3.125
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.02 SJR 0.968 SNIP 1.075
Web of Science (2012): Impact factor 1.966
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 1.54 SJR 0.756 SNIP 0.94
Web of Science (2011): Impact factor 1.388
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Effectiveness of a Canteen Take Away concept in promoting healthy eating patterns among employees.

Objective: To investigate the effectiveness of a relatively novel concept of providing employees with healthy ready-to-heat meals to bring home to their families, here referred to as Canteen Take Away (CTA). Design: Employees’ dietary intake on two weekdays when they received free CTA was compared with that on weekdays when they did not receive CTA. Four nonconsecutive 24 h dietary recalls were applied to assess dietary intake on a daily basis. Moreover, a digital photographic method was used to assess evening meal intake for three consecutive weeks. Data were analysed using a mixed-effects model. Setting: A financial worksite offering CTA. Subjects: Twenty-seven employees. Results: Overall dietary quality as expressed by the energy density of the food (excluding beverages) was found to be significantly lower on days consuming CTA meals compared to days not consuming CTA with regard to evening meal intake (average difference: 2187 (95% CI 2225, 2149) kJ/100 g) and on a daily basis (average difference: 277 (95% CI 2132, 221) kJ/100 g). Other favourable differences included increased vegetable intake (average difference: 83 (95% CI 67, 98) g/evening meal, 109 (95% CI 62, 155) g/d). Conclusion: The present study shows that providing healthy take-away dinners has potential for promoting healthy dietary habits among employees. This reinforces the importance of availability and convenience as effective tools to promote healthy eating habits.

General information
State: Published
Organisations: Division of Nutrition, National Food Institute, Department of Informatics and Mathematical Modeling, Danish Cancer Society
Contributors: Lassen, A. D., Ernst, L., Poulsen, S., Andersen, K. K., Hansen, G. L., Biltoft-Jensen, A. P., Tetens, I.
Pages: 452-458
Publication date: 2012
Peer-reviewed: Yes

Publication information
Journal: Public Health Nutrition
Volume: 15
Issue number: 3
ISSN (Print): 1368-9800
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.29 SJR 1.122 SNIP 0.982
Web of Science (2017): Impact factor 2.485
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.04 SJR 1.1 SNIP 0.896
Web of Science (2016): Impact factor 2.326
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.82 SJR 1.058 SNIP 1.075
Web of Science (2015): Impact factor 2.433
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.15 SJR 1.134 SNIP 1.086
Web of Science (2014): Impact factor 2.679
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.22 SJR 1.105 SNIP 1.191
Web of Science (2013): Impact factor 2.483
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.22 SJR 1.266 SNIP 1.189
Web of Science (2012): Impact factor 2.25
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 1.86 SJR 1.139 SNIP 1.118
Web of Science (2011): Impact factor 2.169
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.093 SNIP 0.991
Web of Science (2010): Impact factor 2.075
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.331 SNIP 1.287
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 1.12 SNIP 1.058
Scopus rating (2007): SJR 1.09 SNIP 1.35
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.989 SNIP 1.068
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 1.311 SNIP 1.287
Scopus rating (2004): SJR 0.913 SNIP 1.073
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 0.777 SNIP 0.989
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 1.124 SNIP 0.841
Web of Science (2002): Indexed yes
Scopus rating (2001): SJR 0.688 SNIP 0.959
Scopus rating (2000): SJR 0.104 SNIP 0.891
Scopus rating (1999): SJR 0.336 SNIP 0.772
Evaluation of dietary intake in Danish adults by means of an index based on food-based dietary guidelines.
The diet quality index is a useful tool in assessing food and nutrient intake in individuals with high vs. low degree of compliance towards the dietary guidelines, and provides a valuable tool in future studies investigating variations in dietary intakes with respect to lifestyle, demographic and regional differences in Denmark.

General information
State: Published
Organisations: National Food Institute, Division of Nutrition
Number of pages: 8
Pages: 17129
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Journal: Food & Nutrition Research
Volume: 56
ISSN (Print): 1654-6628
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
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Scopus rating (2017): CiteScore 2.28 SJR 0.823 SNIP 0.779
Web of Science (2017): Impact factor 2.066
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.24 SJR 0.906 SNIP 0.768
Web of Science (2016): Impact factor 2.039
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.19 SJR 1.024 SNIP 0.911
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.37 SJR 1.03 SNIP 0.918
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Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 1.82 SJR 0.753 SNIP 0.817
Web of Science (2013): Impact factor 1.785
ISI indexed (2013): ISI indexed no
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 1.45 SJR 0.721 SNIP 0.64
ISI indexed (2012): ISI indexed no
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 0 SJR 0.862 SNIP 1.03
ISI indexed (2011): ISI indexed no
Evaluation of the diet in Danish adults using a diet quality index

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State: Published
Organisations: National Food Institute, Division of Nutrition
Number of pages: 1
Publication date: 2012
Peer-reviewed: Yes
Event: Poster session presented at International Conference on Diet and Activity Methods, Rome, Italy.

Electronic versions:
ICDAM Poster_vkkn.pdf
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Source-ID: u::6382
Research output: Research - peer-review › Poster – Annual report year: 2012

OPUS Skolemadsprojekt – design, metoder og udfordringer

General information
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Organisations: National Food Institute, Division of Nutrition
Number of pages: 1
Publication date: 2012
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Event: Abstract from Selskab for ernæringsforsknings årsmøde april 2012 , Denmark.
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Pedometer-determined physical activity in Danish adults considering non-ambulatory activities

General information
State: Published
Organisations: National Food Institute, Division of Nutrition, Linnaeus University
Contributors: Matthiessen, J., Biltoft-Jensen, A. P., Raustorp, A., Rothausen, B. W.
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Event: Poster session presented at International Conference on Diet and Activity Methods, Rome, Italy.
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Web-based Dietary Assessment for 8-11 Year Old School-children

Background and aim

The potential health effects of a New Nordic Diet (NND) are to be tested in the Danish OPUS (Optimal well-being, development and health for Danish children through a healthy New Nordic Diet) School Meal study among 8-11-year-old school-children. Valid and reliable dietary assessment methods are essential for identifying how eating habits may change in response to the intervention and for identifying the impact of the children’s dietary habits on their health and weight status. Several challenges are connected to collecting dietary data from children including their cognitive ability and social desirability which in addition is influenced by the OPUS study. Furthermore, they are untrained in the task and they may not be involved in food shopping or preparation and therefore have little insight into the foods they eat.

The overall aim of the present project was to deliver a validated and suitable dietary assessment tool that could be used by 8-11-year-old Danish school children to assess dietary intake in the OPUS School Meal Study. The specific objectives were to develop a dietary assessment tool suitable for 8-11-year-old children feasible to be used in the OPUS School Meal Study (Paper 1), to validate the developed dietary assessment tool by a combination of validation methods in order to obtain information about the reporting accuracy including the acceptability, under-reporting and over-reporting, and repeatability of WebDASC (Paper 2), and the overall- and lunch specific reporting accuracy of fruit, juice and vegetables (Paper 3).

Materials and methods

The development of a Web-based Dietary Assessment Software for 8-11-year-old Children (WebDASC) followed a prototyping approach: Considerations about factors connected to the OPUS study aim of relevance to the dietary assessment, data level, available resources, and input from professionals, focus groups, literature review, and usability tests preceded its release. Special consideration was given to age-appropriate design issues.

In the validation study, which were conducted as a part of the OPUS School Meal pilot study, 81 school children 8-11-year-old, assisted by parents, recorded their diet in the WebDASC and wore an accelerometer on the same 7 consecutive days twice: at baseline with the habitual diet, and at intervention with the NND. On the same 5 school days as they reported their diet in WebDASC the children’s school lunch was photographed and weighed before and after lunch. During the week after the baseline food- and activity recording fasting blood samples were taken. The acceptability of WebDASC was assessed with a questionnaire. Energy intake (EI) estimated with WebDASC was evaluated against accelerometer-estimated energy expenditure using Bland-Altman plot, correlation and Kappa statistics. The repeatability of EI was assessed using Intra class correlation coefficient. Furthermore, the accuracy of self-reported fruit, juice and vegetable (FJV) intake was evaluated by comparing intake to plasma carotenoids concentration using correlations and Kappa statistics. Intervention effect, weekday and meal effect in FJV intake, and effects of background factors were assessed using Linear Mixed Models. Finally, the accuracy of reporting FJV intake at school lunch were measured by scoring the reported intake in WebDASC against FJV actually eaten observed by the digital photos as either matches, intrusion, omission and faults.

Main findings

WebDASC was developed as an intuitive, cost-effective, and engaging method to collect detailed dietary data from 8-11-year-old children. Results from the acceptability questionnaire demonstrated that it was well accepted among children and adults. Results from the validation study showed that on group level reported EI was in agreement with total energy expenditure (TEE). However, 20% was classified as under-reporters and 20% as over-reporters. Mis-reporting was associated to weight status and a higher body mass index (BMI) characterized under-reporters, and a lower BMI characterized over-reporters compared to acceptable-reporters. The repeatability of EI was fair. Reporting that illness affected eating influenced reported EI and FJV intake.

The WebDASC estimated intake of FJV was significantly correlated with carotenoid plasma concentration, and Spearman and Partial correlation coefficients adjusted for gender, BMI, and TEE showed correlations of 0.58 and 0.49 respectively (p<0.01). Fruits and juice showed higher correlations than vegetables with plasma carotenoid concentration. The results from the photographic observations of school lunch demonstrated that WebDASC attained 82% reporting matches overall and higher percent match for reporting fruits compared to beverages. Intrusions (reporting of FJV not eaten or reporting too large portion size) were the most common reporting mistake (90%). Among intrusion it was more common to report fruit and vegetables not eaten (65%) than reporting a portion size image illustrating a larger portion than the eaten portion size (35%).

Conclusions and implications

The thesis demonstrated that it is possible to develop a child appealing web-based dietary assessment tool that can be used at home on the family’s home computer. The developed WebDASC was acceptable to use for both 8-11-year-old children and their parents, and feasible to use in the OPUS School Meal pilot study. The WebDASC provides good estimates of average energy intake compared to the estimated total energy expenditure. Moreover a moderate repeatability of EI was observed. The ability of the WebDASC to rank participants according to energy intake was fair. The validation study demonstrated that under-reporting and over-reporting was associated to the weight status and BMI of the children. Possible causes may be the weight and health focus of the study, social desirability and the diet reporting itself.

When using plasma carotenoid concentrations as a reference, the WebDASC’s ability to rank participants according to FJV intake was good and the WebDASC obtained a high percent matches for FJV intake and overall intake at school.
lunch.
In conclusion the WebDASC is both acceptable and feasible to use to collect dietary data from 8-11-year-old children in intervention studies. This project demonstrated that, in the study population, data could be used to estimate energy intake on group level and to rank individuals according to EI, and to rank FJV intake both overall and on school meal level, and thereby contribute to the understanding about associations of fruit and vegetable intake, which is an important nutritional indicator for healthy eating habits, and the development of lifestyle diseases.

General information
State: Published
Organisations: National Food Institute, Division of Nutrition, Department of Applied Mathematics and Computer Science, Statistics and Data Analysis, University of Oslo
Contributors: Biltoft-Jensen, A. P., Tetens, I., Trolle, E., Frost Andersen, L., Brockhoff, P. B.
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Original language: English
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  abj_Endelig_afhandling_290412_endelig.pdf
Research output: Research › Ph.D. thesis – Annual report year: 2013

Udvikling af billedserier til Den nationale undersøgelse af danskernes kostvaner og fysiske aktivitet 2011

General information
State: Published
Organisations: National Food Institute, Division of Nutrition
Contributors: Nielsen, T. H., Biltoft-Jensen, A. P., Ygil, K. H.
Number of pages: 85
Publication date: Nov 2011

Publication information
Place of publication: Søborg
Publisher: Danmarks Tekniske Universitet, Fødevareinstituttet
Edition: 1
ISBN (Print): 978-87-92763-01-3
Original language: Danish
Research output: Research › Report – Annual report year: 2011

Undersøgelse af portionsstørrelser blandt danskere i alderen 4 til 75 år

General information
State: Published
Organisations: National Food Institute, Division of Nutrition
Contributors: Nielsen, T. H., Biltoft-Jensen, A. P., Christensen, T., Ygil, K. H., Ege, M., Fagt, S.
Number of pages: 54
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Place of publication: Søborg
Publisher: Danmarks Tekniske Universitet, Fødevareinstituttet
Edition: 1
ISBN (Print): 978-87-92158-35-2
Original language: Danish
Research output: Research › Report – Annual report year: 2011

Improving the diet of employees at blue-collar worksites: results from the "Food at work" intervention study.
Objective. To examine the impact of a 6-month participatory and empowerment-based intervention study on employees’ dietary habits and on changes in the canteen nutrition environment. Design. Worksites were stratified by company type and by the presence or absence of an in-house canteen, and randomly allocated to either an intervention group (five worksites) or a minimum intervention control group (three worksites). The study was carried out in partnership with a trade union and guided by an ecological framework targeting both individual and environment levels. Outcome measures included: (i) changes in employees’ dietary habits derived from 4 d pre-coded food diaries of a group of employees at the worksites (paired-data structure); and (ii) the canteen nutrition environment as identified by aggregating chemical
nutritional analysis of individual canteen lunches (different participants at baseline and at endpoint). Setting. Eight blue-collar worksites (five of these with canteens). Subject. Employees. Results. In the intervention group (n 102), several significant positive nutritional effects were observed among employees, including a median daily decrease in intake of fat (—2.2% E, P = 0.002) and cake and sweets (—18 g/10 MJ, P = 0.002) and a median increase in intake of dietary fibre (3 g/10 MJ, P <0.001) and fruit (55 g/d, P = 0.007 and 74 g/10 MJ, P = 0.009). With regard to the canteen nutrition environment, a significant reduction in the percentage of energy obtained from fat was found in the intervention group (median difference 11% E, P <0.001, n 144). Conclusions. The present study shows that moderate positive changes in dietary patterns can be achieved among employees in blue-collar worksites. Copyright © The Authors 2010.

General information
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Organisations: Division of Nutrition, National Food Institute
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Journal: Public Health Nutrition
Volume: 14
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- Web of Science (2018): Indexed yes
- BFI (2017): BFI-level 1
- Scopus rating (2017): CiteScore 2.29 SJR 1.122 SNIP 0.982
- Web of Science (2017): Impact factor 2.485
- BFI (2016): BFI-level 1
- Scopus rating (2016): CiteScore 2.04 SJR 1.1 SNIP 0.896
- Web of Science (2016): Impact factor 2.326
- BFI (2015): BFI-level 1
- Scopus rating (2015): CiteScore 1.82 SJR 1.058 SNIP 1.075
- Web of Science (2015): Impact factor 2.433
- BFI (2014): BFI-level 1
- Scopus rating (2014): CiteScore 2.15 SJR 1.134 SNIP 1.086
- Web of Science (2014): Impact factor 2.679
- BFI (2013): BFI-level 1
- Scopus rating (2013): CiteScore 2.22 SJR 1.105 SNIP 1.191
- Web of Science (2013): Impact factor 2.483
- ISI indexed (2013): ISI indexed yes
- Web of Science (2013): Indexed yes
- BFI (2012): BFI-level 1
- Scopus rating (2012): CiteScore 2.22 SJR 1.266 SNIP 1.189
- Web of Science (2012): Impact factor 2.25
- ISI indexed (2012): ISI indexed yes
- Web of Science (2012): Indexed yes
- BFI (2011): BFI-level 1
- Scopus rating (2011): CiteScore 1.86 SJR 1.139 SNIP 1.118
- Web of Science (2011): Impact factor 2.169
- ISI indexed (2011): ISI indexed yes
- Web of Science (2011): Indexed yes
- BFI (2010): BFI-level 1
- Scopus rating (2010): SJR 1.093 SNIP 0.991
- Web of Science (2010): Impact factor 2.075
Intake of micronutrients among Danish adult users and non-users of dietary supplements.

Objectives: To evaluate the intake of micronutrients from the diet and from supplements in users and non-users of dietary supplements, respectively, in a representative sample of the Danish adult population. A specific objective was to identify the determinants of supplement use. Design: A cross-sectional representative national study of the intake of vitamins and minerals from the diet and from dietary supplements. Method: The Danish National Survey of Dietary Habits and Physical Activity, 2000-2004. Participants (n=4,479; 53% females) aged 18-75 years gave information about the use of dietary supplements in a personal interview. The quantification of the micronutrient contribution from supplements was estimated from a generic supplement constructed from data on household purchases. Nutrient intakes from the diet were obtained from a self-administered 7-day pre-coded dietary record. Median intakes of total nutrients from the diets of users and non-users of supplements were analysed using the Wilcoxon rank-sum test. Results: Sixty percent of females and 51% of males were users of supplements. With the exception of vitamin D, the intake of micronutrients from the diet was adequate at the group level for all age and gender groups. Among females in the age group 18-49 years, the micronutrient intake from the diet was significantly higher compared with the non-users of dietary supplements. The use of dietary supplements increased with age and with 'intention to eat healthy.' Conclusion: Intake of micronutrients from the diet alone was considered adequate for both users and nonusers of dietary supplements. Younger females who were supplement users had a more micronutrient-dense diet compared to non-users.

General information
State: Published
Organisations: Division of Nutrition, National Food Institute, University of Copenhagen
Contributors: Tetens, I., Biltoft-Jensen, A. P., Spagner, C., Christensen, T., Gille, M., Bügel, S., Rasmussen, L. B.
Publication date: 2011
Peer-reviewed: Yes

Publication information
Journal: Food & Nutrition Research
Volume: 55
Issue number: Suppl.
ISSN (Print): 1654-6628
Ratings:
Relationship between sleep duration, diet and BMI in 4- to 14-year-old Danish children

General information
State: Published
Organisations: Division of Nutrition, National Food Institute, Children's Hospital of Eastern Ontario Research Institut
Contributors: Hoppe, C., Rothausen, B. W., Billoft-Jensen, A. P., Matthiessen, J., Groth, M. V., Chaput, J.

Original language: English
Keywords: Food supplements, Vitamins, Adults, Minerals

Electronic versions:
84E9Bd01.pdf
DOIs:
10.3402/fnr.v55i0.7153
Source: orbit
Source-ID: 283784
Research output: Research - peer-review ; Journal article – Annual report year: 2011
Relative validity of the pre-coded food diary used in the Danish National Survey of Diet and Physical Activity

Objective: To determine the relative validity of the pre-coded food diary applied in the Danish National Survey of Dietary Habits and Physical Activity. Design: A cross-over study among seventy-two adults (aged 20 to 69 years) recording diet by means of a pre-coded food diary over 4 d and a 4 d weighed food record. Intakes of foods and drinks were estimated, and nutrient intakes were calculated. Means and medians of intake were compared, and crossclassification of individuals according to intake was performed. To assess agreement between the two methods, Pearson and Spearman's correlation coefficients and weighted kappa coefficients were calculated. Setting: Validation study of the pre-coded food diary against a 4 d weighed food record. Subjects: Seventy-two volunteer, healthy free-living adults (thirty-five males, thirty-seven females). Results: Intakes of cereals and vegetables were higher, and intakes of fruit, coffee and tea were lower, in the weighed food record compared with the food diary. Intakes of nutrients were grossly the same in the two methods, except for protein, where a higher intake was recorded in the weighed record. In general, moderate agreement between the two methods was found. Conclusions: Participants were classified moderately correct according to food and nutrient intakes assessed in the pre-coded food diary; however values of absolute food intakes should be used and interpreted with caution. Improvement of the methods to estimate portion size may increase the accuracy of the dietary intake estimates.
Healthy eating at worksites: Effectiveness of a Canteen Take Away concept in promoting healthy eating among employees

General information
State: Published
Organisations: Division of Nutrition, National Food Institute, Department of Informatics and Mathematical Modeling
Contributors: Lassen, A. D., Andersen, K. K., Biltoft-Jensen, A. P., Tetens, I.
Number of pages: 104
Publication date: Dec 2010

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Place of publication: Kgs. Lyngby, Denmark
Publisher: Technical University of Denmark (DTU)
ISBN (Print): 978-87-92158-86-4
Original language: English
Afprøvning af simple objektive mål til vurdering af fysisk aktivitet og antropometri i den nationale undersøgelse af danskeres kostvaner og fysiske aktivitet 2007-2008

General information
State: Published
Organisations: Division of Nutrition, National Food Institute, FoodDTU
Contributors: Rothausen, B. W., Gille, M., Biltoft-Jensen, A. P., Raustorp, A., Matthiessen, J.
Number of pages: 61
Publication date: Oct 2010

Considerations and choice of a suitable diet assessment method for 8-10 year old children in the OPUS school intervention project

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P.
Number of pages: 51
Publication date: Jun 2010

Brug af kosttilskud blandt uge danskere - og sammenhæng med næringsstofindtag, kostkvalitet og livsstilsfaktorer

General information
State: Published
Organisations: National Food Institute, Division of Nutrition
Contributors: Gille, M., Biltoft-Jensen, A. P., Hartkopp, H. B., Christensen, T., Fagt, S., Trolle, E.
Number of pages: 56
Publication date: Mar 2010
Development and validation of a new simple Healthy Meal Index for canteen meals

OBJECTIVE: Nutrition evaluation tools should be developed both for scientific purposes and to encourage and facilitate healthy nutritional practices. The purpose of the present study was to develop and validate a simple food-based Healthy Meal Index (HMI) reflecting the nutritional profile of individual canteen meals. DESIGN: The development process included overall model selection, setting nutritional goals and defining scoring systems and thresholds. Three index components were included: (i) contents of fruit and vegetables, (ii) fat content and quality and (iii) contents of wholegrain products and potatoes. The development was built on the principles embodied by the Plate Model, but providing more specificity in some areas. The simple HMI was validated against weighed and chemically analysed food and nutrient content of a representative sample of canteen meals. The sample was split into four categories according to the total index score and compared across categories. SETTING: A total of 180 meals from fifteen worksite canteens. RESULTS: Average energy density decreased significantly across categories (from 876 kJ/100 g to 537 kJ/100 g, P <0.001). Also, the content of total and saturated fat, carbohydrate and fruit and vegetables varied across categories with higher score values being closer to dietary guidelines (P <0.001). CONCLUSIONS: The simple HMI was successful in ranking canteen meals according to their nutritional quality. The index provides a valuable tool to both researchers and food and nutrition professionals, e.g. caterers and dietitians, who wish to evaluate nutritional quality of meals in line with the recommendations for healthier eating without the use of nutrition calculation programs.

General information
State: Published
Evaluation of a digital method to assess evening meal intake in a free-living

Background: In recent years new applications of technologies, including digital images, to capture dietary behaviour in real time have been explored. Objectives: To validate a digital method for estimating evening meal intake in a free-living adult population, and to examine the feasibility of the method for recording evening meal intake over a prolonged period of time.

Design: The digital method was compared against weighed records of 19 participants’ usual evening meals for five consecutive days. Two trained image analysts independently estimated the weight of individual foods within the meals into major food categories, and the nutrient content was calculated. A second study included interviews with 28 participants recording their evening meals on weekdays for three consecutive weeks to get their perspective on the feasibility of the method. Results: High correlation coefficients between the digital method and weighed records were found for all measured food categories and nutrients. Comparable means and acceptable limits of agreement (mean difference +/- 2 SD) were found with regard to macronutrient distribution (e.g. fat content -5 to 6 E%), energy density (-75 to 91 kJ/100 g), and energy-adjusted foods (e.g. fruit and vegetable content -241 to 236 g/10 MJ). The majority of the participants expressed satisfaction with the method and were willing to record their evening meals for 1 month or more using the digital method. Conclusion: The digital method is valid and feasible for evening meal estimation in real-time where a prolonged recording period of participants’ meals is needed.

General information

State: Published
Organisations: Division of Nutrition, National Food Institute, Department of Informatics and Mathematical Modeling
Contributors: Lassen, A. D., Poulsen, S., Andersen, L. E., Andersen, K. K., Biltoft-Jensen, A. P., Tetens, I.
Number of pages: 9
Publication date: 2010
Peer-reviewed: Yes

Publication information

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Volume: 54
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Web of Science (2017): Impact factor 2.086
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.24 SJR 0.906 SNIP 0.768
Web of Science (2016): Impact factor 2.039
Web of Science (2016): Indexed yes
Kostundersøgelser - metoder og anvendelser

General information
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Organisations: National Food Institute, FoodDTU
Contributors: Biltoft-Jensen, A. P., Fagt, S., Tetens, I., Trolle, E.
Publication date: 2010

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Fysisk aktivitet i den voksne danske befolkning 2003-2006 - med fokus på anbefalingerne for fysisk aktivitet

General information
State: Published
Organisations: National Food Institute, Department of Transport, FoodDTU
Contributors: Matthiessen, J., Rothausen, B., Sørensen, M., Biltoft-Jensen, A. P., Fagt, S., Trolle, E., Kørup, K., Bay, H., Groth, M. V.
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Source: orbit
Source-ID: 255890
Research output: Research - peer-review › Report – Annual report year: 2009

Beskrivelse af 8- til 10-årige og 12- til 14-årige børns kost – med fokus på indtag i skole og fritidsordning

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ISBN (Print): 978-87-92158-62-8
Original language: Danish
Research output: Research › Report – Annual report year: 2009

Danskernes måltidsvaner, holdninger, motivation og barrierer for at spise sundt 1995-2008

General information
State: Published
Organisations: National Food Institute
Contributors: Groth, M. V., Sørensen, M. R., Biltoft-Jensen, A. P., Matthiessen, J., Kørup, K., Fagt, S.
Number of pages: 63
Dimensions of socioeconomic position related to body mass index and obesity among Danish women and men

Aims: The aim of this study was to examine the association between different dimensions of socioeconomic position, body mass index (BMI) and obesity in the Danish population. Possible interactions between the different dimensions and gender differences were also investigated.

Methods: This was a cross-sectional survey conducted in 2000–2002 including a simple random sample from the civil registration system, comprising 1953 males and 2167 females aged 4–75 years. Information about different dimensions of socioeconomic position, height and weight was obtained by face-to-face interview.

Associations between dimensions of socioeconomic position and weight status were examined by use of linear multiple regression analysis and logistic regression analysis. Results: BMI and prevalence of obesity were significantly associated with education for both men and women. Odds ratios (ORs) for obesity were 2.9 (95% confidence interval (CI) 1.4–5.9) and 6.5 (95% CI 2.3–18.7) for those with basic school as compared with those with long higher education for men and women, respectively. Women outside the labour market had higher BMIs and a greater prevalence of obesity (OR 2.5 (95% CI 1.6–3.9)) after adjustment for educational level. Conclusions: Education was the dimension most consistently associated with BMI and obesity, indicating the importance of cultural capital for weight status. The gender-specific pattern showed a stronger social gradient for women, and indicated that a high relative body weight was associated with less favourable social and material conditions for women, but not for men. A public health strategy to prevent and reduce obesity should be gender-specific, focus on groups with short education, and incorporate cultural norms.

General information
State: Published
Organisations: National Food Institute, National Veterinary Institute
Contributors: Groth, M. V., Fagt, S., Stockmarr, A., Matthiessen, J., Biltoft-Jensen, A. P.
Pages: 418-426
Publication date: Jun 2009
Peer-reviewed: Yes
Sammenhængen mellem alkoholindtag og kostkvalitet

Introduktion: De nationale undersøgelser af danskernes kostvaner har siden 1995 vist et stigende alkoholindtag i den danske befolkning.

Formålet med dette studie er at belyse sammenhængen mellem kostkvalitet, alkoholindtag og drikkemønster i Danmark.

Resultater: Både med stigende antal genstande pr. uge og med stigende antal ugentlige drikkedage, sås en dårligere kostkvalitet.
I begge tilfælde var tendensen mere tydelig for mænd end for kvinder. Gruppen af mænd og kvinder med bedst kostkvalitet havde et gennemsnittligt alkoholforslag i overensstemmelse med NNAS øvre alkoholgrænser samt færre ugentlige drikkedage end grupper med dårligere kostkvalitet.
Konklusion: Et højt alkoholindtag er forbundet med dårlig kostkvalitet. Fundene i nærværende studie er med til at understøtte NNAS øvre alkoholgrænser samt en eventuel anbefaling om et par alkoholfrie dage om ugen.

General information
State: Published
Organisations: National Food Institute, Division of Nutrition
Contributors: Bøgh-Sørensen, L., Biltoft-Jensen, A. P., Groth, M. V., Matthiessen, J., Fagt, S., Hels, O.
Pages: 695-699
Publication date: 23 Feb 2009
Peer-reviewed: Yes

Publication information
Journal: Ugeskrift for læger
Volume: 171
Issue number: 9
ISSN (Print): 0041-5782
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 0.04 SJR 0.115 SNIP 0.02
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 0.02 SJR 0.118 SNIP 0.056
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 0.03 SJR 0.124 SNIP 0.082
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 0.05 SJR 0.134 SNIP 0.121
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 0.06 SJR 0.142 SNIP 0.125
ISI indexed (2013): ISI indexed no
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 0.08 SJR 0.147 SNIP 0.151
ISI indexed (2012): ISI indexed no
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 0.1 SJR 0.144 SNIP 0.162
ISI indexed (2011): ISI indexed no
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.161 SNIP 0.17
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.158 SNIP 0.201
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.158 SNIP 0.173
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 0.148 SNIP 0.16
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.141 SNIP 0.164
Web of Science (2006): Indexed yes
Development of a valid, yet simple and easy nutrition profiling model

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Mejborn, H., Biltoft-Jensen, A. P., Ygil, K. H., Trolle, E., Tetens, I.
Number of pages: 18
Publication date: Feb 2009

Publication information
Publisher: National Food Institute, Technical University of Denmark
Edition: 1
ISBN (Print): 978-87-92158-27-7
Original language: English
Electronic versions:
Development of a valid, yet simple and easy nutrition profiling model.pdf
Source: orbit
Source-ID: 246622
Research output: Research › Report – Annual report year: 2009

Assessment of pedometer-determined physical activity in Danish adults: the importance of non-ambulatory activities

Purpose To estimate mean values of steps/day in a representative sample of Danish adults (15-75 years) using two different conversion methods for non-ambulatory (non-step) activities. Methods A simple random sample comprising 229 adults (52% men) from the Danish National Survey of Dietary Habits and Physical Activity 2007-08, wore a pedometer (Yamax SW-200 Tokyo, Japan) and recorded daily steps and non-ambulatory activities for seven consecutive days. Time spent on non-ambulatory activities was converted to step equivalents using 1) a simple conversion method (SCM) adding 200 step equivalents/min, and 2) a more complex conversion method (CCM) adding activity-specific step equivalents/min (assuming that 3 METS equals 100 steps/min). Very similar conversion methods have been suggested by Miller et al. 20061. Moreover, data from a Danish pilot study (n=28) were used to adjust for double-counting during cycling. When adding steps for time spent cycling, the mean number of steps recorded during cycling, found in the pilot study, was subtracted from the additional steps. The addition of 10000 step equivalents/day was truncated to 10000 step equivalents/day to avoid overestimation. Results 53% (45% of men, 62% of women) engaged in non-ambulatory activities during the registration period. The most frequently reported non-ambulatory activity was cycling, especially as transportation, which was reported by 39% (men: 31%, women: 48%) with a mean of 125 min/week (men: 107, women: 138 min/week). Our pilot study showed a mean recording of 40 steps/min during cycling. For each conversion method truncation was carried out for 4-5% of all days. At group level the conversion methods added 1482-1494 step equivalents/day corresponding to a 17% increase. For men 1126–1138 step equivalents/day were added (13-14% increase) vs. 1875–1886 step equivalents/day for women (22% increase), thus significantly higher for women compared to men, p=0.03) Conclusion In populations like the Danish, where cycling and other non-ambulatory activities are popular, it will be relevant to account for these activities when assessing pedometer-determined physical activity. Adding activity-specific step equivalents/min, or simply adding 200 step equivalents/min, provides very similar results. Furthermore, when accounting for cycling an adjustment for double-counting should be considered.

General information
State: Published
Organisations: Division of Nutrition, National Food Institute, Linnaeus University
Contributors: Rothausen, B. W., Gille, M., Biltoft-Jensen, A. P., Raustorp, A., Matthiessen, J.
Number of pages: 405
Publication date: 2009
Peer-reviewed: Yes
Diet quality: associations with health messages included in the Danish Dietary Guidelines 2005, personal attitudes and social factors

Objective: To Study the association between diet quality and the new health messages in the Danish Dietary Guidelines 2005, i.e. 'Eat a varied diet', 'Engage in regular physical activity' and 'Maintain a healthy body weight'.

Design/setting/subjects: The study was cross-sectional, comprising a random sample of 3151 Danish adults aged 18-75 years. Dietary intake was estimated using a 7 d pre-coded food diary. Information on social background, leisure-time physical activity, height, body weight and intention to eat healthily was obtained by in-person interviews. Logistic regression models were used to explore the independent effects of energy intake, leisure-time physical activity, food variety, BMI, age, gender, education, household income, location of residence and intention to eat healthily on the likelihood to have high diet quality measured by an index based on the intake of dietary fibre and Saturated fat. Results: Greater food variety (OR = 1.32 for women, 1.13 for men), high leisure-time physical activity (OR = 2.20 for women, 1.91 for men), frequent intentions to eat healthily (OR = 8.19 for women, 5.40 for men) and low energy intake (OR = 0.78 for women, 0.85 for men) were significantly associated with high diet quality. For women education was positively associated with diet quality. The study did not demonstrate any association between BMI and diet quality. Conclusion: The health behaviours 'Eat a varied diet' and 'Engage in regular physical activity' were positively associated with healthy eating. The dietary habits reported were strongly influenced by personal intentions. Thus, the biggest challenge for public health nutritionists will be to reach non-compliers who seldom have intentions to eat healthily.

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Groth, M. V., Matthiessen, J., Wachmann, H., Christensen, T., Fagt, S.
Pages: 1165-1173
Publication date: 2009
Peer-reviewed: Yes

Publication information
Journal: Public Health Nutrition
Volume: 12
Issue number: 8
ISSN (Print): 1368-9800
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.29 SJR 1.122 SNIP 0.982
Web of Science (2017): Impact factor 2.485
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.04 SJR 1.1 SNIP 0.896
Web of Science (2016): Impact factor 2.326
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.82 SJR 1.058 SNIP 1.075
Web of Science (2015): Impact factor 2.433
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.15 SJR 1.134 SNIP 1.086
Web of Science (2014): Impact factor 2.679
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.22 SJR 1.105 SNIP 1.191
Web of Science (2013): Impact factor 2.483
ISI indexed (2013): ISI indexed yes
European Nutrition and Health Report 2009

General information
State: Published
Organisations: National Food Institute, Division of Nutrition
Pages: 1-40
Publication date: 2009
Peer-reviewed: Yes

Publication information
Journal: Annals of Nutrition and Metabolism
Volume: 55
Issue number: Suppl. 2
ISSN (Print): 0250-6807
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.78 SJR 1.317 SNIP 1.057
Web of Science (2017): Impact factor 3.051
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.69 SJR 1.215 SNIP 1.003
Web of Science (2016): Impact factor 2.424
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.55 SJR 1.074 SNIP 1.016
Web of Science (2015): Impact factor 2.461
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.64 SJR 1.294 SNIP 1.096
Web of Science (2014): Impact factor 2.618
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.46 SJR 0.957 SNIP 1.036
Web of Science (2013): Impact factor 2.747
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.35 SJR 0.867 SNIP 0.89
Web of Science (2012): Impact factor 1.661
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 2.38 SJR 0.889 SNIP 0.95
Web of Science (2011): Impact factor 2.257
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.768 SNIP 0.834
Web of Science (2010): Impact factor 2.173
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.688 SNIP 0.898
The general aim of the ENHR II project is to provide a comprehensive and up-to-date report on the nutrition and health situation in Europe that focuses on diet, physical activity, tobacco use and alcohol consumption.

The European Nutrition and Health Report 2009 will contribute to the identification of major nutrition and health problems in the EU regions and to the monitoring and evaluation of food and nutrition policies already in place within the Member States.

The method implies collecting and critically reviewing available data on the most common indicators used for the assessment of nutrition and health situation of 25 European countries.

The European Nutrition and Health Report 2009 will provide information on dietary habits, diet related health indicators as well as established food and nutrition policies in European countries.

**General information**

**State:** Published  
**Organisations:** National Food Institute, Division of Nutrition  
**Number of pages:** 412  
**Publication date:** 2009

**Publication information**

**Publisher:** Karger  
**Volume:** 55  
**ISBN (Electronic):** 978–3–8055–9297–0  
**Original language:** English  
**(Forum of Nutrition, Vol. 62).**  
**Electronic versions:** enhrii_book.pdf  
**URLs:**  

**Bibliographical note**

Note the author list is not complete  
**Source:** orbit  
**Source-ID:** 315826  
**Research output:** Research - peer-review » Journal article – Annual report year: 2009
Increased social disparities in health related lifestyle?

**General information**
State: Published  
Organisations: National Food Institute  
Contributors: Groth, M. V., Sørensen, M. R., Matthiessen, J., Biltoft-Jensen, A. P., Fagt, S., Hels, O.  
Publication date: 2009  
Peer-reviewed: Yes  
Event: Abstract from Annual Conference of the ISNPA, Lisbon, Portugal, .  
Source: orbit  
Source-ID: 245906  
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2009

**Influence of recording length on reporting status**

Background: Use of short recording periods is often applied in prospective dietary surveys in order to reduce participant burden, fatigue, drop-out or misreporting. It is also assumed that a shorter recording period may help optimize initial participation because of the lower burden. Objective: To investigate the impact of recording length on reporting status, expressed as the ratio between energy intake and calculated basal metabolic rate (EI/BMR), the percentage of consumers of selected food items and the number reported food items per meal and eating occasions per day. Methods: Data from two different population samples were used for comparison. In total 138 adult volunteers (68 men and 70 women aged 20-59 years) recruited within the Copenhagen area and 2504 (1153 men and 1351 women aged 20-59 y) randomly selected adults from the Danish Civil Registration System, whom participated in a validation study and the Danish National Survey of Dietary Habits and Physical Activity 2000-2002, respectively. Both studies had a cross-sectional design. Volunteers and participants completed a pre-coded food diary every day for 7 consecutive days. BMR was predicted from equations.  
Results: In the validation study, EI/BMR was significantly lower on 1st, 2nd and 3rd consecutive recording days compared to 4-7 recording days (P <0.032). The same results were seen in the Danish National Survey except that only day 1-2 was lower than day 3-7 (P <0.006). The proportion of consumers of selected food items increased with the number of recording days and was minimum 10 % higher for 7 days compared to 4 days. The number of eating occasions per day and the number of reported food items per meal did not differ between 4 and 7 recording days. Conclusion: Reducing the recording period from 7 to 4 consecutive days did not change EI/BMR at group level. Still a study effect seemed to occur in the two population samples resulting in lower estimates of EI/BMR day 1-2. The proportion of consumers was higher with a 7-day recording. These results support a reporting period from 4-7 days.

**General information**
State: Published  
Organisations: Division of Nutrition, National Food Institute  
Contributors: Biltoft-Jensen, A. P., Matthiessen, J., Fagt, S., Groth, M. V., Rasmussen, L. B., Hels, O.  
Number of pages: 370  
Publication date: 2009

**Host publication information**
Title of host publication: 7th International Conference on Diet and Activity Methods : Diet and Physical Activity Assessment: From the Individual to the Environment  
Publisher: U.S. National Cancer Institute  
Source: orbit  
Source-ID: 246375  
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2009

**Influence of recording length on reporting status**

Background: Use of short recording periods is often applied in prospective dietary surveys in order to reduce participant burden, fatigue, drop-out or misreporting. It is also assumed that a shorter recording period may help optimize initial participation because of the lower burden. Objective: To investigate the impact of recording length on reporting status, expressed as the ratio between energy intake and calculated basal metabolic rate (EI/BMR), the percentage of consumers of selected food items and the number reported food items per meal and eating occasions per day. Methods: Data from two different population samples were used for comparison. In total 138 adult volunteers (68 men and 70 women aged 20-59 years) recruited within the Copenhagen area and 2504 (1153 men and 1351 women aged 20-59 y) randomly selected adults from the Danish Civil Registration System, whom participated in a validation study and the Danish National Survey of Dietary Habits and Physical Activity 2000-2002, respectively. Both studies had a cross-sectional design. Volunteers and participants completed a pre-coded food diary every day for 7 consecutive days. BMR was predicted from equations.  
Results: In the validation study, EI/BMR was significantly lower on 1st, 2nd and 3rd consecutive recording days compared to 4-7 recording days (P <0.032). The same results were seen in the Danish National Survey except that only day 1-2 was lower than day 3-7 (P <0.006). The proportion of consumers of selected food items increased with the number of recording days and was minimum 10 % higher for 7 days compared to 4 days. The number of eating occasions per day and the number of reported food items per meal did not differ between 4 and 7 recording days. Conclusion: Reducing the recording period from 7 to 4 consecutive days did not change EI/BMR at group level. Still a study effect seemed to occur in the two population samples resulting in lower estimates of EI/BMR day 1-2. The proportion of consumers was higher with a 7-day recording. These results support a reporting period from 4-7 days.

**General information**
State: Published  
Organisations: Division of Nutrition, National Food Institute  
Publication date: 2009  
Peer-reviewed: Yes  
Event: Poster session presented at 7th International Conference on Diet and Activity Methods, Washington DC, United States.  
Keywords: Number of consumers, Danish Dietary survey, Underreporting  
Source: orbit  
Source-ID: 246450
**Jo mere alkohol des mere usund kost**

**General information**
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Fagt, S., Matthiessen, J., Bøgh-Sørensen, L., Groth, M. V.
Pages: 23-24
Publication date: 2009
Peer-reviewed: Unknown

**Publication information**
Journal: Diætisten
Volume: 99
ISSN (Print): 1395-1769
Ratings:
ISI indexed (2013): ISI indexed no
ISI indexed (2012): ISI indexed no
ISI indexed (2011): ISI indexed no
Original language: Danish
Source: orbit
Source-ID: 246454

**Maks. ½ liter sodavand og saft om ugen**

**General information**
State: Published
Organisations: National Food Institute, Division of Nutrition
Contributors: Biltoft-Jensen, A. P., Matthiessen, J.
Number of pages: 6
Publication date: 2009
Peer-reviewed: No

**Publication information**
Journal: E-artikel fra DTU Fødevareinstitutet
Issue number: 1
ISSN (Print): 1904-5581
Original language: Danish
URLs:

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Research output: Research - peer-review » Poster – Annual report year: 2009
Validation of the Danish 7-day pre-coded food diary among adults: energy intake v. energy expenditure and recording length.

Under-reporting of energy intake (EI) is a well-known problem when measuring dietary intake in free-living populations. The present study aimed at quantifying misreporting by comparing EI estimated from the Danish pre-coded food diary against energy expenditure (EE) measured with a validated position-and-motion instrument (ActiReg®). Further, the influence of recording length on EI:BMR, percentage consumers, the number of meal occasions and recorded food items per meal was examined. A total of 138 Danish volunteers aged 20–59 years wore the ActiReg® and recorded their food intake for 7 consecutive days. Data for 2504 participants from the National Dietary Survey 2000–2 were used for comparison of characteristics and recording length. The results showed that EI was underestimated by 12 % on average compared with EE measured by ActiReg® (PreMed AS, Oslo, Norway). The 95 % limits of agreement for EI and EE were −6·29 and 3·09 MJ/d. Of the participants, 73 % were classified as acceptable reporters, 26 % as under-reporters and 1 % as over-reporters. EI:BMR was significantly lower on 1–3 consecutive recording days compared with 4–7 recording days (P <0·03). Percentage consumers of selected food items increased with number of recording days. When recording length was 7 d, the number of reported food items per meal differed between acceptable reporters and under-reporters. EI:BMR was the same on 4 and 7 consecutive recording days. This was, however, a result of under-reporting in the beginning and the end of the 7 d reporting. Together, the results indicate that EI was underestimated at group level and that a 7 d recording is preferable to a 4 d recording period.

General information
State: Published
Organisations: National Food Institute, FoodDTU
Contributors: Biltoft-Jensen, A. P., Matthiessen, J., Rasmussen, L. B., Fagt, S., Groth, M. V., Hels, O.
Pages: 1838-1846
Publication date: 2009
Peer-reviewed: Yes

Publication information
Journal: British Journal of Nutrition
Volume: 102
Issue number: 12
ISSN (Print): 0007-1145
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 3.65 SJR 1.756 SNIP 1.555
Web of Science (2017): Impact factor 4.586
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.46 SJR 2.055 SNIP 1.535
Web of Science (2016): Impact factor 4.844
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 3.52 SJR 1.583 SNIP 1.442
Web of Science (2015): Impact factor 4.051
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 3.18 SJR 1.532 SNIP 1.273
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 3.61 SJR 2.746 SNIP 2.479
Web of Science (2013): Impact factor 3.861
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 3.12 SJR 2.308 SNIP 2.427
Fuldkorn - Definition og vidensgrundlag for anbefaling af fuldkornsindtag i Danmark

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Number of pages: 101
Publication date: Nov 2008

Publication information
Place of publication: Søborg
Publisher: Danmarks Tekniske Universitet, Fødevareinstituttet
Edition: 2
Original language: Danish
Danskernes kostvaner 1995-2006: Status og udvikling med focus på frugt og grønt samt sukker

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Fagt, S., Biltoft-Jensen, A. P., Matthiessen, J., Groth, M. V., Christensen, T., Trolle, E.
Number of pages: 56
Publication date: Sep 2008

Publication information
Publisher: Danmarks Tekniske Universitet, Fødevareinstituttet
Edition: 1
Original language: Danish
Electronic versions:
Danskernes_kostvaner_1995-2006.pdf
Source: orbit
Source-ID: 234368
Research output: Research › Report – Annual report year: 2008

Alcohol intake and diet quality among Danish adults

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Groth, M. V., Biltoft-Jensen, A. P., Bøgh-Sørensen, L., Matthiessen, J., Fagt, S., Hels, O.
Publication date: 2008
Peer-reviewed: Yes
Event: Poster session presented at 9th Nordic Nutrition Conference, Copenhagen, Denmark.
Source: orbit
Source-ID: 234787
Research output: Research - peer-review › Poster – Annual report year: 2008

Comparison of the Danish Physical Activity Questionnaire with a validated position and motion instrument
Objective To compare the Danish Physical Activity Questionnaire (DPAQ) estimating physical activity energy expenditure (PAEE) and physical activity level (PAL) and the pattern of physical activity (including health-related physical activity) with measurements from a validated position and motion instrument (ActiReg(R))). Methods One hundred and thirty-eight healthy Danish volunteers aged 20-59 years participated. Participants filled in the DPAQ at the end of the day every day for seven consecutive days and carried the ActiReg(R) on the same days as the DPAQ were filled in. Results A small, but statistically significant difference was seen between the DPAQ and the ActiReg(R) for PAEE (mean: -0.32 MJ center dot d(-1); 95% limits of agreement: ((-2.88)-2.24 MJ center dot d(-1)); P = 0.003) and PAL (-0.03; ((-0.37)-0.31); P = 0.02) for the whole group and for women (P <0.008 for PAEE and PAL), but not for men. The correlation between methods was good for PAEE (r = 0.71, P <0.001) and PAL (r = 0.64, P <0.001). No difference was observed for time spent in moderate plus vigorous physical activity (MVPA) (P = 0.40). Time reported in MVPA with the DPAQ was positively correlated with time spent in MVPA measured by the ActiReg(R)) (rho = 0.53, P <0.001). Conclusions Although the volunteer sample may influence the representativeness of the results, the DPAQ provided a close estimate of PAEE, PAL (2-5% underestimation) and health-related physical activity (MVPA) in healthy adults at group level. The results indicate that the questionnaire can be used to rank individuals according to energy expenditure and level of total physical activity and to provide information on health-related physical activity.

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Matthiessen, J., Biltoft-Jensen, A. P., Rasmussen, L. B., Hels, O., Fagt, S., Groth, M. V.
Pages: 311-322
Publication date: 2008
Peer-reviewed: Yes

Publication information
Journal: European Journal of Epidemiology
Development of a recommended food intake pattern for healthy Danish adolescents consistent with the Danish dietary guidelines, nutrient recommendations and national food preferences

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Pages: 451-463
Publication date: 2008
Peer-reviewed: Yes

Publication information
Journal: Journal of Human Nutrition and Dietetics
Volume: 21
ISSN (Print): 0952-3871
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.86 SJR 1.157 SNIP 1.099
Web of Science (2017): Impact factor 2.681
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.51 SJR 1.157 SNIP 1.084
Web of Science (2016): Impact factor 2.638
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.17 SJR 0.986 SNIP 0.998
Web of Science (2015): Impact factor 2.583
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 1.9 SJR 0.676 SNIP 1.072
Web of Science (2014): Impact factor 1.987
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.11 SJR 0.939 SNIP 1.188
Web of Science (2013): Impact factor 2.074
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 1.94 SJR 0.854 SNIP 1.003
Web of Science (2012): Impact factor 1.972
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 1.63 SJR 0.734 SNIP 0.78
Web of Science (2011): Impact factor 1.738
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.73 SNIP 1.05
Web of Science (2010): Impact factor 1.789
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.679 SNIP 0.874
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.731 SNIP 0.828
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 0.929 SNIP 0.897
Ernæringsbudskaber mangler helhedsperspektiver

**General information**
State: Published
Organisations: Division of Food Production Engineering, National Food Institute, Division of Nutrition
Contributors: Jørgensen, S. B. (ed.), Biltoft-Jensen, A. P.
Publication date: 2008
Peer-reviewed: Unknown

**Publication information**
Journal: FoodDTU Midt i Ugen
Original language: Danish
Source: orbit
Source-ID: 258512
Research output: Communication › Journal article – Annual report year: 2008

Kostrådene drukner i medierne

**General information**
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P.
Publication date: 2008
Peer-reviewed: Unknown

**Publication information**
Journal: Kommunikatøren
ISSN (Print): 1399-6878
Ratings:
ISI indexed (2013): ISI indexed no
ISI indexed (2012): ISI indexed no
ISI indexed (2011): ISI indexed no
Original language: Danish
Source: orbit
Source-ID: 234319
Research output: Communication › Journal article – Annual report year: 2008

Midtvejsevaluering af Metodeundersøgelsen 2007-08

**General information**
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Rothausen, B. W., Gille, M., Biltoft-Jensen, A. P., Matthiessen, J.
Publication date: 2008

**Publication information**
Original language: Danish
Source: orbit
Prevalence and trends in overweight and obesity among children and adolescents in Denmark

Aim: To study the current prevalence and trends in overweight and obesity among children and adolescents in Denmark from 1995 to 2000—2002. Methods: Cross-sectional national dietary surveys were conducted in 1995 and 2000—2002. The analysis was based on two random population samples from the Danish civil registration system. Body mass index (BMI) was calculated from self-reported height and weight for 1,026 and 1,152 children and adolescents (4—18 years), who participated in 1995 and 2000—2002, respectively. The prevalence of overweight and obesity was defined according to the international age and gender-specific child BMI cut-off points. In the statistical analysis, overweight and obesity were included in the prevalence of overweight. Results: Mean BMI increased significantly between 1995 and 2000—2002 for all combinations of age groups (4—6, 7—10, 11—14 and 15—18 years) and genders. Prevalence of overweight increased between survey years for boys and girls for all age groups (4—6, 7—10, 11—14 and 15—18 years), although formal statistical significance was not reached (p>0.05). When all children and adolescents (4—18 years) were analysed, the prevalence of overweight rose significantly from 10.9% (95% confidence interval (CI) 9.0—12.8) to 14.4% (95% CI 12.5—16.3) between 1995 and 2000—2002 (p=0.01), whereas the increase in the prevalence of obesity did not reach significance (1995, 2.3% (95% CI 1.3—3.3) vs. 2000—2002, 2.4% (95% CI 1.6—3.3); p=0.74). Conclusions: The present study revealed a significant increase from 1995 to 2000—2002 in mean BMI for boys and girls for all age groups and a significant increase in the prevalence of overweight when all Danish children and adolescents (4—18 years) were analysed.

General information
State: Published
Organisations: National Food Institute, Division of Nutrition, National Veterinary Institute, Technical University of Denmark
Pages: 153-160
Publication date: 2008
Peer-reviewed: Yes

Publication information
Volume: 36
ISSN (Print): 1403-4948
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 1.58 SJR 0.823 SNIP 0.857
Web of Science (2017): Impact factor 1.646
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 1.34 SJR 0.778 SNIP 0.785
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.72 SJR 0.873 SNIP 1.049
Web of Science (2015): Impact factor 1.318
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 3.47 SJR 2.319 SNIP 1.666
Web of Science (2014): Impact factor 1.832
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.82 SJR 1.715 SNIP 1.374
Web of Science (2013): Impact factor 3.125
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.02 SJR 0.968 SNIP 1.075
Web of Science (2012): Impact factor 1.966
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 1.54 SJR 0.756 SNIP 0.94
Web of Science (2011): Impact factor 1.388
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.784 SNIP 0.946
Web of Science (2010): Impact factor 1.487
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.122 SNIP 1.131
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 0.277 SNIP 1.064
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 1.021 SNIP 3.105
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.572 SNIP 0.65
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 0.182 SNIP 0
Scopus rating (2004): SJR 0.2 SNIP 0.531
Scopus rating (2003): SJR 0.4 SNIP 1.199
Scopus rating (2002): SJR 0.368 SNIP 0.332
Scopus rating (2001): SJR 0.439 SNIP 7.952
Scopus rating (2000): SJR 0.314 SNIP 1.045
Scopus rating (1999): SJR 0.281 SNIP 0.673

Original language: English
Keywords: trend, obesity, children, Denmark, Body mass index
DOIs:
The intake of saturated fat and dietary fibre: a possible indicator of diet quality
The aim of the present study was to assess if a simple dietary quality index (SDQI) is a useful indicator for nutritional quality in the Danish diet. Data from the Danish National Dietary Survey 2000-2 for adults (n 3151; age 18-75 years) were used to construct an SDQI based on the intake of dietary fibre and saturated fat. The SDQI was used to rank the individuals into three subgroups: the 25 % closest in meeting the recommended intakes of saturated fat and dietary fibre (compliers), the 25 % furthest away (non-compliers) and the 50 % in between (intermediates). Significant differences in food and nutrient intake between these subgroups were identified by intakes of food groups and intakes of nutrients followed by non-parametric tests. Compared with the Nordic Nutrition Recommendations 2004 and the Danish Dietary Guidelines 2005, compliers had a significantly better nutrient profile than intermediates and non-compliers, as the diet of compliers contained more whole-grain cereals, fruits, vegetables and fish, and more frequently low-fat dairy products, lean meats and boiled potatoes. The diet of all subgroups, especially non-compliers, had a high content of nutrient-poor, energy-dense foods, for example, salty snacks, confectionery, and beverages, for example, soft drinks and alcohol. The SDQI is a simple and useful tool to characterise the diet quality of Danish adults.
Undersøgelse af merudgifter til diabeteskost 2007-2008

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Gille, M., Bilton-Jensen, A. P., Brolev, K. S., Christensen, M. B., Jensen, J. D., Rask, I. K., Søndergaard, K., Ygil, K. H., Trolle, E.
Publication date: 2008

Publication information
Publisher: Servicestyrelsen
ISBN (Print): 87-92-03147-1
Original language: Danish
Whole grain intake in the Danish population

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Ygil, K. H., Fagt, S., Matthiessen, J., Christensen, T., Groth, M. V.
Publication date: 2008
Peer-reviewed: Unknown

Publication information
Journal: Diætisten
Volume: 94
ISSN (Print): 1395-1769
Ratings:
ISI indexed (2013): ISI indexed no
ISI indexed (2012): ISI indexed no
ISI indexed (2011): ISI indexed no
Original language: English
Source: orbit
Source-ID: 234323
Research output: Communication › Journal article – Annual report year: 2008

Wholegrain intake in the Danish population

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Ygil, K. H., Fagt, S., Matthiessen, J., Christensen, T., Groth, M. V., Mejborn, H., Trolle, E.
Publication date: 2008
Peer-reviewed: Yes
Event: Poster session presented at 9th Nordic Nutrition Conference, Copenhagen, Denmark.
Source: orbit
Source-ID: 234789
Research output: Research - peer-review › Poster – Annual report year: 2008

Børns og unges måltidsvaner 2000-2004

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Fagt, S., Christensen, T., Groth, M. V., Biltoft-Jensen, A. P., Matthiessen, J., Trolle, E.
Number of pages: 81
Publication date: Aug 2007
A new reference method for the validation of the nutrient profiling schemes using dietary surveys

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Pages: 29-36
Publication date: 2007
Peer-reviewed: Yes

Publication information
Journal: European Journal of Nutrition
Volume: 46
Issue number: Suppl. 2
ISSN (Print): 1436-6207
Ratings:
  BFI (2018): BFI-level 1
  Web of Science (2018): Indexed yes
  BFI (2017): BFI-level 1
  Scopus rating (2017): CiteScore 3.36 SJR 1.408 SNIP 1.076
  Web of Science (2017): Impact factor 4.423
  Web of Science (2017): Indexed yes
  BFI (2016): BFI-level 1
  Scopus rating (2016): CiteScore 3.22 SJR 1.328 SNIP 1.158
  Web of Science (2016): Impact factor 4.37
  Web of Science (2016): Indexed yes
  BFI (2015): BFI-level 1
  Scopus rating (2015): CiteScore 3.13 SJR 1.36 SNIP 1.143
  Web of Science (2015): Impact factor 3.239
  BFI (2014): BFI-level 1
  Scopus rating (2014): CiteScore 3.28 SJR 1.271 SNIP 1.213
  Web of Science (2014): Impact factor 3.467
  Web of Science (2014): Indexed yes
  BFI (2013): BFI-level 1
  Scopus rating (2013): CiteScore 3.2 SJR 1.031 SNIP 1.138
  Web of Science (2013): Impact factor 3.84
  ISI indexed (2013): ISI indexed yes
  Web of Science (2013): Indexed yes
  BFI (2012): BFI-level 1
  Scopus rating (2012): CiteScore 2.91 SJR 0.983 SNIP 1.056
  Web of Science (2012): Impact factor 3.127
  ISI indexed (2012): ISI indexed yes
  BFI (2011): BFI-level 1
  Scopus rating (2011): CiteScore 3.02 SJR 1.15 SNIP 1.106
  Web of Science (2011): Impact factor 2.75
  ISI indexed (2011): ISI indexed yes
A validation method for nutrient profiles using dietary surveys

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Pages: 40-41
Publication date: 2007

Host publication information
Title of host publication: Annals of Nutrition and Metabolism
Volume: 51
Publisher: Karger
ISBN (Print): 0250-6807
Source: orbit
Source-ID: 237989
Research output: Research › Conference abstract in proceedings – Annual report year: 2007

Characteristics of misreporters of dietary intake and physical activity
Objective: To characterise misreporters of energy intake (EI) and energy expenditure (EE). Design: Cross-sectional study, using a validated position and motion instrument, ActiReg (R) as the reference method to study misreporters of EI and of EE. EI was measured using a dietary record and EE using a physical activity questionnaire (PAQ). Misreporters were defined as subjects outside the 95% confidence limits of agreement between EI or EE reported/EE measured. Setting: Free-living Danish volunteers. Subjects: One hundred and thirty-eight volunteers aged between 20 and 59 years. Results: Body mass index, smoking, 'try to eat healthily' and worries about weight were related to degree of under-reported EI. The percentage energy from added sugar was lowest (P <0.001) and the percentage energy from protein (P <0.001) highest in under-reporters compared with acceptable reporters. Subjects who reported being very physically active at work or in leisure time reported a higher EE than measured EE compared with less physically active subjects (P <0.05). Likewise, subjects who regard themselves as fit or very fit reported a higher EE than subjects who regard themselves as moderately fit (P <0.05). Possible over-reporters reported less time as very light activity (P = 0.007), more time as moderate activity (P
and more time as vigorous activity (P = 0.02) than acceptable reporters. Conclusions: Under-reporting of EI should always be taken into consideration; however, only a few characteristics of under-reporters are consistent among studies. Misreporting of EI was more prevalent than misreporting of EE. The level of physical activity more than the time spent involved in various activities was misreported.

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Rasmussen, L. B., Matthiessen, J., Biltoft-Jensen, A. P., Tetens, I.
Pages: 230-237
Publication date: 2007
Peer-reviewed: Yes

Publication information
Journal: Public Health Nutrition
Volume: 10
Issue number: 3
ISSN (Print): 1368-9800
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.29 SJR 1.122 SNIP 0.982
Web of Science (2017): Impact factor 2.485
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.04 SJR 1.1 SNIP 0.896
Web of Science (2016): Impact factor 2.326
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 1.82 SJR 1.056 SNIP 1.075
Web of Science (2015): Impact factor 2.433
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.15 SJR 1.134 SNIP 1.086
Web of Science (2014): Impact factor 2.679
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.22 SJR 1.105 SNIP 1.191
Web of Science (2013): Impact factor 2.483
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.22 SJR 1.266 SNIP 1.189
Web of Science (2012): Impact factor 2.25
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 1.86 SJR 1.139 SNIP 1.118
Web of Science (2011): Impact factor 2.169
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.093 SNIP 0.991
Web of Science (2010): Impact factor 2.075
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.331 SNIP 1.287
Comparison of different nutrient profiling schemes to a new reference method using dietary surveys

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Pages: 37-46
Publication date: 2007
Peer-reviewed: Yes

Publication information
Journal: European Journal Of Nutrition
Volume: 46
ISSN (Print): 1436-6207
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 3.36 SJR 1.408 SNIP 1.076
Web of Science (2017): Impact factor 4.423
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.22 SJR 1.328 SNIP 1.158
Web of Science (2016): Impact factor 4.37
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 3.13 SJR 1.36 SNIP 1.143
Web of Science (2015): Impact factor 3.239
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 3.28 SJR 1.271 SNIP 1.213
Web of Science (2014): Impact factor 3.467

DoIs: 10.1017/S136898000724666X
Source: orbit
Source-ID: 214364
Research output: Research - peer-review; Journal article – Annual report year: 2007

Web of Science (2009): Indexed yes
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 1.12 SNIP 1.058
Scopus rating (2007): SJR 1.09 SNIP 1.35
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.989 SNIP 1.068
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 1.311 SNIP 1.287
Scopus rating (2004): SJR 0.913 SNIP 1.073
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 0.777 SNIP 0.989
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 1.124 SNIP 0.841
Web of Science (2002): Indexed yes
Scopus rating (2001): SJR 0.688 SNIP 0.959
Scopus rating (2000): SJR 0.104 SNIP 0.891
Scopus rating (1999): SJR 0.336 SNIP 0.772
Original language: English
Keywords: energy intake, misreporting, physical activity, energy expenditure, dietary records
Comparisons of levels and patterns of physical activity in normal weight vs. overweight adults

**General information**
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Rothausen, B. W., Matthiessen, J., Biltoft-Jensen, A. P., Rasmussen, L. B., Hels, O.
Publication date: 2007
Peer-reviewed: Yes
Source: orbit
Source-ID: 234337
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2007
Comparisons of physical activity in normal weight vs. overweight adults

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Rothausen, B. W., Matthiessen, J., Biltoft-Jensen, A. P., Rasmussen, L. B., Hels, O.
Publication date: 2007
Peer-reviewed: No
Source: orbit
Source-ID: 237820
Research output: Research › Poster – Annual report year: 2007

Mad og måltider

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P.
Publication date: 2007
Peer-reviewed: Unknown

Publication information
Journal: Svinegodt.dk (Webmagasin)
Volume: Efterår 2007
Issue number: 3. september
Original language: Danish
URLs:
http://www.svinegodt.dk/smcmagasin/Svinegodt/Magasin/Efteraar_2007/Index.htm?ID=2694
Source: orbit
Source-ID: 234355
Research output: Communication › Journal article – Annual report year: 2007

Possible pathways between education and relative body weight in Danish women and men

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Groth, M. V., Fagt, S., Biltoft-Jensen, A. P., Gabrielsen, G., Matthiessen, J.
Publication date: 2007
Peer-reviewed: No
Source: orbit
Source-ID: 237818
Research output: Research › Conference abstract for conference – Annual report year: 2007

Sukker i børn og unges kost

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Fagt, S., Biltoft-Jensen, A. P.
Number of pages: 5
Publication date: 2007

Host publication information
Title of host publication: Børn og unges måltidsva-ner 2000-2004
Publisher: Danmarks Tekniske Universitet, Fødevareinstituttet
URLs:
Component based input of composite foods in selfadminstred dietary intakes recordings

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Christensen, T., Biltoft-Jensen, A. P.
Publication date: 2006
Peer-reviewed: No
Event: Poster session presented at The 6th International Conference on Dietary Assessment Methods, Copenhagen, Denmark, .
Source: orbit
Source-ID: 238412
Research output: Research › Poster – Annual report year: 2006

Dimensions of socioeconomic status related to body mass index among Danish women and men

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Groth, M. V., Fagt, S., Matthiessen, J., Biltoft-Jensen, A. P.
Publication date: 2006
Peer-reviewed: No
Event: Abstract from The 5th Conference of the International Society of Behavioral Nutrition and Physical Activity, Boston, USA, .
Source: orbit
Source-ID: 238410
Research output: Research › Conference abstract for conference – Annual report year: 2006

Spis op - så bliver du en stor dreng

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Fagt, S., Biltoft-Jensen, A. P.
Pages: 10-14
Publication date: 2006
Peer-reviewed: No

Publication information
Journal: Tandlaegernes Nye Tidsskrift
Volume: 10
ISSN (Print): 0901-9898
Ratings:
BFI (2011): BFI-level 1
BFI (2010): BFI-level 1
BFI (2009): BFI-level 1
BFI (2008): BFI-level 1
Original language: Danish
Source: orbit
Source-ID: 247686
Research output: Research › Journal article – Annual report year: 2006

Større portioner lokker unge til at spise mere

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Fagt, S., Biltoft-Jensen, A. P.
Survival at the movies

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Fagt, S.
Publication date: 2006
Peer-reviewed: Unknown

Validation of a new physical activity questionnaire for assessment of energy expenditure

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Matthiessen, J., Biltoft-Jensen, A. P., Rasmussen, L. B., Groth, M. V., Fagt, S.
Publication date: 2006
Peer-reviewed: No
Event: Poster session presented at Sixth International Conference on Dietary Assessment Methods, Copenhagen, Denmark.
Source: orbit
Source-ID: 238406
Research output: Research › Poster – Annual report year: 2006

Forslag til retningslinjer for sund kost i skoler og institutioner

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Ygil, K. H., Christensen, L. M., Christensen, S. M., Christensen, T.
Number of pages: 97
Publication date: Aug 2005

Publication information
Place of publication: Søborg
Publisher: Danmarks Fødevareforskning
ISBN (Print): 87-91587-11-5
Original language: Danish
Danskernes kostvaner 2000-2002: Hovedresultater

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Number of pages: 168
Publication date: Apr 2005

Publication information
Place of publication: København
Publisher: Danmarks Fødevareforskning
Edition: 1
ISBN (Print): 87-91587-09-3
Original language: Danish
Source: orbit
Source-ID: 238396
Research output: Research › Report – Annual report year: 2005

Awareness of health behaviour risk in nutrition: intake of fruit and vegetables

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Groth, M. V., Matthiessen, J., Biltoft-Jensen, A. P., Fagt, S.
Publication date: 2005
Peer-reviewed: Yes
Event: Poster session presented at 4th annual meeting of the International Society of Behavioral Nutrition and Physical Activity, Amsterdam, the Netherlands.
Source: orbit
Source-ID: 238413
Research output: Research - peer-review › Poster – Annual report year: 2005

Mad på arbejde - Metode, forløb og evaluering af projektet

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Number of pages: 48
Publication date: 2005

Publication information
Publisher: Danmarks Fødevareforskning
ISBN (Print): 87-91587-08-5
Original language: Danish
Electronic versions: mpa_press.pdf
Source: orbit
Source-ID: 244078
Research output: Research › Report – Annual report year: 2005

MyPyramid eller McPyramid

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Spis fisk og fiskepålæg - flere gange om ugen

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P.
Publication date: 2005

Host publication information
Title of host publication: Kostrådene 2005
Source: orbit
Source-ID: 238425
Research output: Research › Book chapter – Annual report year: 2005

Sund mad i skoler og institutioner

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Christensen, S., Biltoft-Jensen, A. P.
Publication date: 2005
Peer-reviewed: No

Publication information
Journal: Køkkenliv
Volume: 15
Original language: Danish
URLs:
http://www.kost.dk/kokkenliv/artikler/2005/15/15220051506
Source: orbit
Source-ID: 247443
Research output: Research › Journal article – Annual report year: 2005

Sund mad i skoler og institutioner

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Christensen, S., Biltoft-Jensen, A. P.
Publication date: 2005
Peer-reviewed: No

Publication information
Journal: Diætisten
Volume: 77
ISSN (Print): 1395-1769
Underreporting in nationwide dietary surveys

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Fagt, S., Biltoft-Jensen, A. P., Matthiessen, J., Groth, M. V.
Publication date: 2005
Peer-reviewed: No
Event: Poster session presented at The 27th Scientific Annual Conference of Arbeitsgemeinschaft Ernährungsverhalten (AGEV), Karlsruhe, Germany.
Source: orbit
Source-ID: 238418
Research output: Research › Poster – Annual report year: 2005

Udviklingen i danskerne kost 1985-2001: med fokus på sukker og alkohol samt motivation og barrierer for sund livsstil

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Number of pages: 130
Publication date: Jan 2004

Publication information
Place of publication: København
Publisher: Danmarks Fødevare- og Veterinærforskning
Edition: 1
ISBN (Print): 87-988242-7-9
Original language: Danish
Source: orbit
Source-ID: 238398
Research output: Research › Report – Annual report year: 2004

Et "pyramidespill" hvor man er sikker på at tabe - bare ikke i vægt

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Beck, A. M., Matthiessen, J.
Publication date: 2004
Peer-reviewed: No

Publication information
Journal: Forum
Volume: 4
ISSN (Print): 1559-663X
Ratings:
ISI indexed (2013): ISI indexed no
ISI indexed (2012): ISI indexed no
ISI indexed (2011): ISI indexed no
Original language: Danish
Source: orbit
Source-ID: 247724
Stegt flæsk med persillesovs - endnu engang

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Groth, M. V., Biltoft-Jensen, A. P., Matthiessen, J., Fagt, S.
Publication date: 2004
Peer-reviewed: No

Publication information
Journal: Forum
ISSN (Print): 1559-663X
Ratings:
ISI indexed (2013): ISI indexed no
ISI indexed (2012): ISI indexed no
ISI indexed (2011): ISI indexed no
Original language: Danish
Source: orbit
Source-ID: 247727

Trends and status in added sugars and alcohol intake in the Danish population 1985-2000/01

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Matthiessen, J., Groth, M. V., Fagt, S.
Publication date: 2004
Peer-reviewed: No
Source: orbit
Source-ID: 238414

Hehedssyn på fisk og fiskevarer

General information
State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute, Division of Nutrition, National Institute of Aquatic Resources, Communications and Management Secretariat, Division of Food Chemistry, Division of Toxicology and Risk Assessment, Department of Environmental Science and Engineering
Publication date: 2003

Publication information
Publisher: Fødevaredirektoratet
ISBN (Print): 87-91399-31-9
Original language: Danish
Electronic versions:
Hehedssyn på fisk og fiskevarer[1].pdf
Source: orbit
Source-ID: 245498

Samarbejde med dagligvarehandel og producenter om fokus på sund mad
Size makes a difference

Objective: To elucidate status and trends in portion size of foods rich in fat and/or added sugars during the past decades, and to bring portion size into perspective in its role in obesity and dietary guidelines in Denmark. Data sources: Information about portion sizes of low-fat and full-fat food items was obtained from a 4-day weighed food record (Study 1). Trends in portion sizes of commercial foods were examined by gathering information from major food manufacturers and fast food chains (Study 2). Data on intakes and sales of sugar-sweetened soft drinks and confectionery were obtained through nation-wide dietary surveys and official sales statistics (Study 3). Results: Study 1: Subjects ate and drank significantly more when they chose low-fat food and meal items (milk used as a drink, sauce and sliced cold meat), compared with their counterparts who chose food and meal items with a higher fat content. As a result, almost the same amounts of energy and fat were consumed both ways, with the exception of sliced cold meat (energy and fat) and milk (fat). Study 2: Portion sizes of commercial energy-dense foods and beverages, and fast food meals rich in fat and/or added sugars, seem to have increased over time, and in particular in the last 10 years. Study 3: The development in portion sizes of commercial foods has been paralleled by a sharp increase of more than 50% in the sales of sugar-sweetened soft drinks and confectionery like sweets, chocolate and ice creams since the 1970s. Conclusions: Larger portion sizes of foods low in fat and commercial energy-dense foods and beverages could be important factors in maintaining a high energy intake, causing over-consumption and enhancing the prevalence of obesity in the population. In light of this development, portion size ought to take central place in dietary guidelines and public campaigns.

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Number of pages: 64
Publication date: Jun 2002

Publication information
Publisher: Fødevaredirektoratet
Kost og fysisk aktivitet: Indsatsområder i forebyggelsen og inden for den organiserede idræt

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Bundgaard, T., Clemmensen, I. H., Heitmann, B. L., Lorenzen, K., Rasmussen, L. B., Søndergaard, H., Trolle, E.
Publication date: 2002

Publication information
Place of publication: Søborg, Danmark
Publisher: Fødevaredirektoratet
Original language: English
Source: orbit
Source-ID: 239167
Research output: Research - peer-review › Report – Annual report year: 2002

Om kostundersøgelsen

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Andersen, N. L., Biltoft-Jensen, A. P., Christensen, T., Fagt, S., Matthiessen, J., Møller, A., Saxholt, E.
Publication date: 2002

Publication information
ISBN (Print): 87-91189-17-9
Original language: Danish
Source: orbit
Source-ID: 238439
Research output: Research › Report – Annual report year: 2002

Kost og fysisk aktivitet: Indsatsområder i forebyggelsen og inden for den organiserede idræt

General information
State: Published
Organisations: Division of Nutrition, National Food Institute
Contributors: Biltoft-Jensen, A. P., Bundgaard, T., Clemmensen, I. H., Heitmann, B. L., Lorenzen, K., Matthiessen, J., Rasmussen, L. B., Søndergaard, H., Trolle, E.
Publication date: 2001

Publication information
Place of publication: København
Publisher: Fødevaredirektoratet
Original language: Danish
Source: orbit
Source-ID: 238403
Research output: Research › Report – Annual report year: 2001

Nye retningslinjer for mad og børn
Diet and physical activity influence the incidence of widespread diseases such as cardiovascular diseases and diabetes. In order to launch focused prevention initiatives and monitor developments in the population’s health-related lifestyle we need to systematically gather knowledge about and map population dietary and activity habits. The National Food Institute is behind the Danish National Survey of Diet and Physical Activity. The Institute conducted national dietary surveys in 1985, 1995, 2000-2008 and 2011-2013. The survey has included physical activity in the two latest surveys, which is treated in a dietary context as well as an independent research field. The survey is representative, multidisciplinary and maps the diet, physical activity and overweight of the Danish population as well as their determinants. It is a tool for assessing population nutrient intake as well as the degree to which official health policy objectives are met. It thus contributes with knowledge about the four key lifestyle factors: Diet, smoking, alcohol and physical activity in the Danish population. The survey results have been published in several reports and in a wide range of journals and articles. The National Food Institute uses the results for consulting and research within nutrition, for example about enrichment of foods, assessment of new ingredients, in relation to dietary recommendations and to target nutritional information at the general population. Data from the dietary studies also constitute an important element in risk assessments. The National Food Institute cooperate with a wide range of Danish and international stakeholders on improving methodologies and conducting other dietary surveys. The National Food Institute also collects supplementary dietary data for describing developments – for example through statistics data on the provision of foods.

Fagt, S., Project Manager, National Food Institute, Division of Nutrition
Matthiessen, J., Project Participant, National Food Institute, Division of Nutrition
Biltoft-Jensen, A. P., Project Participant, National Food Institute, Division of Nutrition
Knudsen, V. K., Project Participant, National Food Institute, Division of Nutrition
Optimal well-being, development and health for Danish children through a healthy New Nordic

The overall aim is to develop a New Nordic Diet and evaluate its effects on dietary intake, health, and learning abilities in healthy Danish school children. The task of the National Food Institute is to develop and validate a suitable dietary assessment method for children aged 8-10 yrs and in close collaboration with another project partner to ensure that the New Nordic Diet fulfills the nutrient recommendations and food-based dietary guidelines. Further, the National Food Institute is responsible for measurements of dietary intake and physical activity in the school interventions.

Social inequality in relation to overweight and obesity

The aim of this project is to expand our knowledge about the relationship between socio-economic status and overweight and obesity in Denmark. The role of cultural norms, psychological factors, dietary practices and physical activity as possible mechanisms involved in the development of overweight and obesity will be investigated. The significance of biological factors as subjectively perceived by overweight and obese individuals will be highlighted too. It is generally recognised that the causes of overweight and obesity are closely related to social and cultural phenomena. Systematic research in such areas is therefore important for the development of health promotion strategies in the field of obesity. The project consists of a quantitative and a qualitative part. The quantitative part is based on analysis of data from the Danish National Survey of Dietary Habits 2000-2002. Analysis will include associations between relative weight and dimensions of socio-economic status as well as influence of attitudes, dietary habits and physical activity. Qualitative interviews with 30 selected participants from the survey will include participants’ life story, perception of own weight and determinants of weight.

Activities:

Madpræferencer og livsstil
Period: 22 Sep 2016
Anja Pia Biltoft-Jensen (Speaker)
National Food Institute
Division of Risk Assessment and Nutrition

Description
Præsentation ved Landbrug & Fødevarer konference "Ernæringsfokus" 22. september 2016

Related external organisation
**Kødindtag hos danskere, der opfylder NNR og lever efter kostråd.**

*Period: 29 Jun 2016*

Anja Pia Biltoft-Jensen (Speaker)

National Food Institute

Division of Risk Assessment and Nutrition

**Description**

Præsentation af projektresultater Landbrug & Fødevarer 29/6 2016.

**Related organisation**

Kødindtag hos danskere, der opfylder NNR og lever efter kostråd.

Biltoft-Jensen, A. P. (Speaker)

29 Jun 2016

Activity: Talks and presentations › Talks and presentations in private or public companies and organisations

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**2 x 24 timers interview. Kostundersøgelserstake i Europa anbefalet af EFSA.**

*Period: 28 Jun 2016*

Anja Pia Biltoft-Jensen (Speaker)

National Food Institute

Division of Risk Assessment and Nutrition

**Description**


**Related organisation**

2 x 24 timers interview. Kostundersøgelserstake i Europa anbefalet af EFSA.

Biltoft-Jensen, A. P. (Speaker)

28 Jun 2016

Activity: Talks and presentations › Conference presentations

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**The New version of Danish food composition database FRIDA including a case study on recipe calculation compared to a chemical analysis.**

*Period: 16 May 2016 → 18 May 2016*

Anja Pia Biltoft-Jensen (Speaker)

National Food Institute

Division of Risk Assessment and Nutrition

**Description**

Abstract. 39th National Nutrient Databank Conference. 16-18 May, Washington

**Related external organisation**

NATIONAL NUTRIENT DATABANK CONFERENCE COMMITTEES

Activity: Talks and presentations › Conference presentations

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**Best practice on how to deal with non-response.**

*Period: 4 Apr 2016 → 5 Apr 2016*

Anja Pia Biltoft-Jensen (Speaker)

National Food Institute
Division of Risk Assessment and Nutrition

Description
Workshop arranged by the NKMT-funded Nordic network for national dietary surveys.

Related event
Best practice on how to deal with non-response.: Challenges in national dietary surveys – recruitment and non-response.
04/04/2016 → 05/04/2016
Uppsala, Sweden
Activity: Talks and presentations › Conference presentations

Køds rolle i kosten
Period: 29 Feb 2016
Anja Pia Biltoft-Jensen (Speaker)
National Food Institute
Division of Risk Assessment and Nutrition

Description
Præsentation af projektresultater i Landbrug & Fødevare 29. Februar 2016

Related external organisation
Landbrug og Fødevarer
Axelborg, Axeltorv 3, 1609, København V, Denmark
Activity: Talks and presentations › Talks and presentations in private or public companies and organisations

Indtag af vitaminer og mineraler: Kost og kosttilskud.
Period: 25 Feb 2016
Anja Pia Biltoft-Jensen (Speaker)
National Food Institute
Division of Risk Assessment and Nutrition

Description
Præsentation af projektresultater for kosttilskudsproducenter den 25/2 2016.

Related organisation
Indtag af vitaminer og mineraler: Kost og kosttilskud.
Biltoft-Jensen, A. P. (Speaker)
25 Feb 2016
Activity: Talks and presentations › Talks and presentations in private or public companies and organisations

Comparison of different methods for calculating usual intake
Anja Pia Biltoft-Jensen (Other)
National Food Institute
Division of Risk Assessment and Nutrition

Description
12th EUROPEAN NUTRITION CONFERENCE FENS BERLIN 20-23/10 2015

Related external organisation
The Federation of European Nutrition Societies (FENS)
Activity: Talks and presentations › Conference presentations
**Unsupervised machine learning of food images.**
Anja Pia Biltoft-Jensen (Supervisor)
National Food Institute
Division of Risk Assessment and Nutrition

**Description**

Activity: Examinations and supervision › Supervisor activities

**Potentiel effekt af at spise Nøglehulsmærkede produkter: fokus på indtag af næringsstoffer og fuldkorn.**
Period: 4 Mar 2015
Anja Pia Biltoft-Jensen (Speaker)
National Food Institute
Division of Risk Assessment and Nutrition

**Description**
Præsentation 4/3 2015 Stockholm, Nordisk Nøglehulsdag

**Related external organisation**
Ministry of Environment and Food of Denmark
Denmark
Activity: Talks and presentations › Conference presentations

**Dietary assessment methods**
Period: 4 Feb 2015 → 5 Feb 2015
Anja Pia Biltoft-Jensen (Speaker)
National Food Institute
Division of Risk Assessment and Nutrition

**Description**
Lecturing for a whole day in dietary assessment methods at related subjects

**Related external organisation**
BTSF
Activity: Talks and presentations › Conference presentations

**Comparison of different methods for calculating usual intakes**
Period: 26 Jan 2015 → 28 Jan 2015
Anja Pia Biltoft-Jensen (Other)
Elisabeth Wreford Andersen (Speaker)
National Food Institute
Division of Risk Assessment and Nutrition
Department of Informatics and Mathematical Modeling

**Description**
Det 37. symposium i anvendt statistik 26.-28. januar 2015- Danmarks Tekniske Universitet

**Related external organisation**
Statistics Denmark
Denmark
Activity: Talks and presentations › Conference presentations
Presentation at 11th Karlsruhe Nutrition Congress  
Period: 10 Nov 2008  
Anja Pia Biltoft-Jensen (Speaker)  
National Food Institute  
Division of Nutrition  

Description  
Indlæg ved levnedsmiddelselskabets møde om fukdkorn d. 27 november.

Related external organisation  
Unknown external organisation  
Activity: Talks and presentations › Conference presentations

Possible pathways between education  
Anja Pia Biltoft-Jensen (Speaker)  
National Food Institute  
Division of Nutrition  

Description  
Place: Sixth Annual meeting of the International Society for Behavioural Nutrition and Physical Activity, Oslo

Related external organisation  
Unknown external organisation  
Activity: Talks and presentations › Conference presentations

The Danish National Survey of Dietary Habits and Physical Activity: 7 d record  
Period: 1 Jan 2007 → …  
Anja Pia Biltoft-Jensen (Speaker)  
National Food Institute  
Division of Nutrition  

Related external organisation  
Unknown external organisation  
Activity: Talks and presentations › Conference presentations

Dimensions of socioeconomic status related to body mass index among Danish women and men  
Period: 1 Jan 2006 → …  
Anja Pia Biltoft-Jensen (Speaker)  
National Food Institute  
Division of Nutrition  

Description  

Related external organisation  
Unknown external organisation  
Activity: Talks and presentations › Conference presentations
Press clippings:

Væskeindtag - anbefalinger og beregninger
Anja Pia Biltoft-Jensen
17/07/2018
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Væskeindtag - anbefalinger og beregninger
17/07/2018
i Form, Denmark, Print
Maria Albøg Jespersen
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Kylling som proteinkilde
Anja Pia Biltoft-Jensen
12/01/2018
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Kylling som proteinkilde
12/01/2018
Voresmad.dk, Denmark, Web
Christian Erin-Madsen
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Barrierer i forhold til at efterleve kostrådene
Anja Pia Biltoft-Jensen
11/01/2018
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Barrierer i forhold til at efterleve kostrådene
11/01/2018
DR Livsstil & Samfund (National), Denmark, Web
Mikael Ladegaard Laursen
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Energidrikke
Anja Pia Biltoft-Jensen
09/12/2017
National Food Institute, Division of Risk Assessment and Nutrition

Media coverage (1)

Sundhedseffekter af at drikke energidrikke
09/12/2017
Samvirke (National), Denmark, Web
Thomas Schønning
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media
Brug af kosttilskud
Anja Pia Biltoft-Jensen
28/11/2017
National Food Institute, Division of Risk Assessment and Nutrition

Media coverage (1)

En sund kost kan ikke erstattes af kosttilskud uden sundhedsmæssige konsekvenser
28/11/2017
Women (National), Denmark, Print
Maria Denise Christoffersen
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Superfoods
Anja Pia Biltoft-Jensen
17/08/2017
National Food Institute, Division of Risk Assessment and Nutrition

Media coverage (1)

Superfoods - er de pengene værd?
17/08/2017
Ritzau Fokus (National), Denmark, Other
Bettine Romme Andersen
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Kosttilskud
Anja Pia Biltoft-Jensen
10/07/2017
National Food Institute, Division of Risk Assessment and Nutrition

Media coverage (1)

Danskernes forbrug af kosttilskud
10/07/2017
JP FINANS (National), Denmark, Print
Benjamin Werner Christensen
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Børn, fuldkorn og sundhed
Anja Pia Biltoft-Jensen
16/05/2017
National Food Institute, Division of Risk Assessment and Nutrition

Media coverage (1)

Fuldkorn - hvorfor er det godt for os?
16/05/2017
Ritzau Fokus (National), Denmark, Other
Anna Raabæk
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Kosttilskud
Anja Pia Biltoft-Jensen
13/03/2017
Er kosttilskud nødvendige?
13/03/2017
Radio Nova (Regional), Denmark, Radio
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Danskeres brug af kosttilskud
Anja Pia Biltoft-Jensen
09/03/2017
National Food Institute, Division of Risk Assessment and Nutrition

Forskellige kaffetypers koffeinindhold
Anja Pia Biltoft-Jensen
26/01/2017
National Food Institute, Division of Risk Assessment and Nutrition

Er nogle typer juleslik værre end andre?
29/11/2016
TV2 online, Web
Camilla Carlson
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Danskernes brug af vitamin/mineralpiller
Anja Pia Biltoft-Jensen
29/11/2016
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Media coverage (1)
Danskernes brug af vitamin/mineralpiller
29/11/2016
Samvirke, Print
Inger Houman Abildgaard
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Danskernes indtag af kosttilskud
Anja Pia Biltoft-Jensen
26/09/2016

Subject
Danskernes indtag af kosttilskud
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Danskernes indtag af kosttilskud
26/09/2016
DR1, Television
Asger Mow
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Danskernes indtag af kosttilskud
Anja Pia Biltoft-Jensen
15/09/2016

Subject
Danskernes indtag af kosttilskud
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Danskernes indtag af kosttilskud
15/09/2016
DR1, Television
Asger Mow og Peter qutrup Giesling
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Vitaminer og mineraler fra kosten og kosttilskud
Anja Pia Biltoft-Jensen
05/09/2016

Subject
Vitaminer og mineraler fra kosten og kosttilskud
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Vitaminer og mineraler fra kosten og kosttilskud
05/09/2016
Ritzau Fokus, Web
Mathias Sinius Mølgaard
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media
Indtag af kosttilskud
Anja Pia Bilton-Jensen
09/08/2016

Subject
Indtag af kosttilskud
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Indtag af kosttilskud
09/08/2016
DR1, Television
Asger Mow
Anja Pia Bilton-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Danskernes kødforbrug
Anja Pia Bilton-Jensen
02/08/2016

Subject
Danskernes kødforbrug
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Danskernes kødforbrug
02/08/2016
Information, Print
Jørgen Steen Nielsen
Anja Pia Bilton-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Danskernes forbrug af kød
Anja Pia Bilton-Jensen
30/05/2016
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Danskernes forbrug af kød
30/05/2016
DR Nyheder, Web
Merian Garde Gräs
Anja Pia Bilton-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Danskernes indtag af kød
Anja Pia Bilton-Jensen
15/04/2016
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Danskernes indtag af kød
15/04/2016
Dyrenes Beskyttelse, Web
Lars Madsen
Anja Pia Bilton-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Indtag af Oksekød
Anja Pia Biltoft-Jensen
11/04/2016
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Indtag af Oksekød
11/04/2016
DR, Web
Emma Toft
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Indtag af Oksekød
Anja Pia Biltoft-Jensen
11/04/2016
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Indtag af Oksekød
11/04/2016
TV2, Television
Katja Brandt Andersen
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Er brune bananer sundere at spise end gule bananer (overmodne kontra almindelig modningsgrad) ?
Anja Pia Biltoft-Jensen
14/03/2016
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Er brune bananer sundere at spise end gule bananer (overmodne kontra almindelig modningsgrad) ?
14/03/2016
Ekstra Bladet, Web
Jacob Andersen
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Indtag af kosttilskud
Anja Pia Biltoft-Jensen
09/03/2016
National Food Institute, Division of Risk Assessment and Nutrition

Media contribution (1)

Indtag af kosttilskud
09/03/2016
Nutraingredients.com, Web
Annie-Rose Harrison-Dunn
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media
Indtag af forarbejdet kød blandt børn
07/03/2016
Food Culture.dk, Web
Maria Store
Anja Pia Biltoft-Jensen
National Food Institute, Division of Risk Assessment and Nutrition
Press/Media: Press / Media

Danskernes indtag af kød samt livsstil forbundet med indtag af hhv. lidt og meget kød
Anja Pia Biltoft-Jensen
02/03/2016
National Food Institute, Division of Risk Assessment and Nutrition

Svinekød og sundhed
Anja Pia Biltoft-Jensen
11/02/2016
National Food Institute, Division of Risk Assessment and Nutrition

Hvor mange danske børn der har medansvar for madlavning
Anja Pia Biltoft-Jensen
30/10/2015

Danskernes indtag af slik og chokolade
Anja Pia Biltoft-Jensen
23/03/2015

Subject
Danskernes indtag af slik og chokolade
Danskernes indtag af slik og chokolade
23/03/2015
Go'Aften Danmark, Television
Allan Bjørreskov
Anja Pia Biltøft-Jensen
National Food Institute, Division of Nutrition
Press/Media: Press / Media

Vurdering af 2 vitaminpille præparater lancieret til kvinder og mænd
Anja Pia Biltoft-Jensen
29/09/2014

Subject
Vurdering af 2 vitaminpille præparater lancieret til kvinder og mænd
National Food Institute, Division of Nutrition
Press/Media: Press / Media

Sundhedsanprisninger
Anja Pia Biltøft-Jensen
17/12/2012
National Food Institute, Division of Nutrition
Press/Media: Press / Media

Sundhedsanprisninger
Anja Pia Biltøft-Jensen
15/08/2012
National Food Institute, Division of Nutrition
Press/Media: Press / Media

Kosttilskud
Anja Pia Biltøft-Jensen
03/02/2012
National Food Institute, Division of Nutrition
Kosttilskud
03/02/2012
Videnskab.dk, Web
Martin Ledstrup
Anja Pia Biltoft-Jensen
National Food Institute, Division of Nutrition
Press / Media

Chokoladepålæg
Anja Pia Biltoft-Jensen
30/09/2010
National Food Institute, Division of Nutrition

Sundhedsanprisninger og mærkning af fødevarer
Anja Pia Biltoft-Jensen
01/08/2010
National Food Institute, Division of Nutrition

Fuldkorn
Anja Pia Biltoft-Jensen
01/01/2010
National Food Institute, Division of Nutrition

Unges forbrug af pasta
Anja Pia Biltoft-Jensen
01/01/2010
National Food Institute, Division of Nutrition
Nordisk køkken
Anja Pia Biltoft-Jensen
01/01/2010
National Food Institute, Division of Nutrition

Media contribution (1)

Nordisk køkken
01/01/2010
Print
Anja Pia Biltoft-Jensen
National Food Institute, Division of Nutrition
Press/Media: Press / Media

Forbindelsen mellem at se tv/film og indtag af slik og lign.
Anja Pia Biltoft-Jensen
01/01/2010
National Food Institute, Division of Nutrition

Media contribution (1)

Forbindelsen mellem at se tv/film og indtag af slik og lign.
01/01/2010
Print
Anja Pia Biltoft-Jensen
National Food Institute, Division of Nutrition
Press/Media: Press / Media

Portionsstørrelser
Anja Pia Biltoft-Jensen
01/01/2010
National Food Institute, Division of Nutrition

Media contribution (1)

Portionsstørrelser
01/01/2010
Print
Anja Pia Biltoft-Jensen
National Food Institute, Division of Nutrition
Press/Media: Press / Media

Vi køber sundere fødevarer på grund af mere oplysning og de kampagner og tiltag der har været med henblik på at ændre danskernes kostvaner
Anja Pia Biltoft-Jensen
01/01/2009
National Food Institute, Division of Nutrition

Media contribution (1)

Vi køber sundere fødevarer på grund af mere oplysning og de kampagner og tiltag der har været med henblik på at ændre danskernes kostvaner
01/01/2009
Print
Anja Pia Biltoft-Jensen
National Food Institute, Division of Nutrition
Press/Media: Press / Media

Andel, der efterløver kostråd, og bud på, hvorfor det ikke er flere
Anja Pia Biltoft-Jensen
01/01/2009
Andel, der efterlever kostråd, og bud på, hvorfor det ikke er flere
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Danskernes indtag af laks
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Morgenmad er vigtig
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Sammenhæng mellem alkohol og kost
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Sammenhæng mellem alkohol og kostkvalitet
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Radio
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Reklamer for usunde fødevarer til børn
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01/01/2009
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Media contribution (1)

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