ABSTRACTS

CLINICAL NUTRITION

Spinal muscular atrophy, types I and II: What are the differences in body composition and resting energy expenditure?

Bertoli S, Amicis R, Mastella C, et al. *Clin Nutr*. 2016; http://dx.doi.org/10.1016/j.clnu.2016.10.020.

The authors seek to assess and compare the total and regional fat, lean body mass, mineral masses, and body water in a sample of children with both type I and type II spinal muscular atrophy. A secondary aim is to compare resting energy expenditure among the two groups on the basis of body composition. The authors utilize a comparison study for this assessment. A sample of 30 children was used. The sample was 60% male, with 15 children in both type I and type II groups. The mean age of the children in the type I and type II groups was 3.6 and 3.5 years, respectively. The sample was recruited between April 2015 and May 2016 from two clinical spinal muscular atrophy referral centers in Italy. Inclusion criteria included: Genetically confirmed diagnosis of either type, age 1 to 10 years, ability to lie on a scanning table, no tracheotomy or assisted ventilation for more than 16 hours, and no acute infection of any kind. The type II children were matched by age and sex with each of the type I children and each underwent measurements and instrumental analysis on the same morning at the center. Measurements included body weight, supine length, arm length, femur length, tibia length, lean body mass, bone mineral content, total body water, intra cellular water, extracellular water, and indirect calorimetry. Resting energy expenditure was measured as oxygen consumption and carbon dioxide production using an open-circuit ventilated-hood system. Statistical analysis was performed using SPSS version 21.0 for Windows (SPSS Inc, 2012).

EDUCATION

Learning cooking skills at different ages: A cross-sectional study.

Lavelle F, Spence M, Hollywood L, et al. *Int J Behav Nutr Phys Act*. 2016; http://dx.doi.org/10.1186/s12966-016-0446-y.

The authors investigate the relationship between age and source of learning as it pertains to cooking skills as measured by skill retention, cooking practices, cooking attitudes, diet quality, and health. The authors used data compiled as part of a cross-sectional survey project investigating cooking and food skills in Northern Ireland the Republic of Ireland. A sample of 1,049 adults aged 20 to 60 years was selected by a nationwide marketing company using quotas to ensure it was nationally representative. The sample was 22.9% under 12 years old (Children), 33.1% 13 to 18 years old (Teenagers), 44% 18 to 60 years old (Adults). The sample was 50.03% female. The survey included basic demographic information: Age, sex, education level, and occupation of the highest household earner. Participants were queried as to their history in terms of learning cooking skills, as well tested in terms of their ability to cook and prepare food. Attitudes and diet quality were also measured in the survey. All data were analyzed using IBM SPSS Statistics version 22 (IBM Corp, 2013). Descriptive statistics were used to examine socio-demographic differences between the children, teenagers, and adults. χ^2 crosstabs and analyses of variance with post hoc comparisons made with Tukey's Honest Significant Difference test were used to investigate significant differences between the three groups of learners and the different sources of learning components.

MANAGEMENT

Evaluating the effectiveness of organizational-level strategies with or without an activity tracker to reduce office workers' sitting time: A cluster-randomized trial.

Brakenridge C, Fjeldsoe B, Young D, et al. *Int J Behav Nutr Phys Act*. 2016; http://dx.doi.org/10.1186/s12966-016-0441-3.

The investigators assess the short- and long-term effectiveness of two interventions concerning work time and sitting time in office workers. A cluster-randomized trial was designed to address this issue. A total of 153 subjects participated, 54% of whom were male. Mean age was 38.9 years, with 84% possessing a university education. Mean body mass index was 24.6, with 63% of the sample deemed normal weight, 28% overweight, and 9% obese. Participants were recruited between March and April 2014 from one corporation with two offices in the Australian cities Sydney and Brisbane. Eligibility included working near to and regularly visiting the office location. The participants were cluster-randomized into teams with the control groups receiving only organizational support by way of managerial e-mails (9 teams, 87 participants) and the intervention group wearing an activity tracker on their waist (9 teams, 66 participants). Primary outcomes included sitting time during work hours and overall work hours, with secondary outcomes including time between sitting bouts, standing time, stepping time, and number of steps. Both the control and intervention groups established an intra-company competition in which they vied for most improved status. Analyses were conducted in SPSS Statistics version 22 (IBM Corp, 2013) and Stata version 13 (StataCorp, LP, 2013).

PEDIATRIC

Fermented milk consumption and common infections in children attending day-care centers: A randomized trial.

Prodeus A, Niborski V, Schrezenmeir J, et al. *J Pediatr Gastroenterol Nutr*. 2016;63(5):534-543.

The authors investigate the effect of regular consumption of a fermented milk product on the incidence of common infectious diseases in young children attending day

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care. The study adopted the hypothesis that the consumption of fermented milk containing strain *Lactobacillus casei* CNCM I-1518 would prevent such diseases. A multicenter, double-blind, randomized, placebo-controlled study with two parallel arms was designed to address the issue. The sample studied contained 599 Russian children in Moscow between the ages of 3 and 6 years with a mean age of 4 years, 54% of whom were male. The study was conducted between November 2006 and April 2007 and recruited children attending day cares in 12 centers in Moscow. Exclusionary criteria included having had an infectious disease 7 days prior to the study or receiving systemic or topical treatment likely to interfere with the study parameters. Children with allergies or hypersensitivity to milk or dairy were also excluded, as were those with evolutive or chronic pathologies, diarrhea, constipation, artificial nutrition, eating disorders, special medicated diet, or any surgery requiring anesthesia 2 months prior. The subjects were randomly assigned to an intervention group of 300 and a control of 299. The intervention group received a sweetened, fermented dairy drink containing at least 1,010 colony-forming units per 100 g of the probiotic strain *L casei* CNCM I-1518 combined with yogurt. The control group received a sweetened, nonflavored, nonfermented dairy drink without the cultures. The subjects received the product twice daily for 3 months with a 1-month observation period following. The primary outcome measured was incidence of common infectious disease. The hypothesis was dedicated to evaluating the statistical difference between both groups for the number of disease incidents using a Poisson regression with a two-sided test at the 5% α-level assuming moderate overdispersion.

RESEARCH

Histamine food poisonings: A systematic review and meta-analysis.

Colombo F, Cattaneo P, Confalonieri E, Bernardi C. *Crit Rev Food Sci Nutr*. 2016; http://dx.doi.org/10.1080/10408398.2016.1242476.

The authors examine histamine food poisoning and the histamine content in food involved in such outbreaks. A systematic review and meta-analysis performed to study the topic. A total of 52 studies were ultimately included in the review and analysis. The overall analysis comprised 1,171 humans involved in 103 incidents of histamine intoxication ranging in sample sizes 1 to 347. The authors employed literature searches in 32 of the primary electronic databases. Eligible studies included any concerning histamine poisoning outbreaks or single episodes that report a measure of the histamine content and the type of food involved. Studies published in any country between 1959 through 2013 were considered eligible as were reports written in English, Italian, French, German, Portuguese, and Spanish. Subjects with food allergies or other serious health issues were excluded, as were those concerning children under age 6 or adults over 80 years. The search strategy included key words: *histamine, scombroid syndrome, histamine poisoning, food, seafood, meat products, fish, cheese, beer, wine*, and *biogenic amines*. Subgroup analysis was also performed concerning country and geographic location of the poisoning samples as well as food source: fresh seafood, frozen seafood, canned seafood, fermented seafood, seafood other than the aforementioned, cheese or dairy, and other foods. The initial search yielded 9,390 references that were trimmed down after excluding duplicate reports and those that did not meet the criteria. All pooled analyses were based on random effect modeling. Calculations were performed using metagen procedure of meta package on R Software (Schwarzer, 2010).

SPORTS NUTRITION

Gender differences and access to a sports dietitian influence dietary habits of collegiate athletes.

Hull M, Jagim A, Oliver J, et al. *J Int Soc Sports Nutr*. 2016; http://dx.doi.org/10.1186/s12970-016-0149-4.

The authors examine the dietary habits and behaviors of college athletes as they pertain to access to a full-time sports dietitian, with a secondary aim being to assess the differences in dietary practices between male and female athletes. A cross-sectional survey was designed to address the issue. A total of 383 NCAA Division I athletes were included in the survey process. Inclusion criteria included being medically cleared for athletic participation and aged 18 years or over. The surveyed athletes were 63% female with a mean age of 19.7 years and drawn from two universities in the Atlantic Athletic and Atlantic Coast Athletic Conference, respectively, both of which employed a full-time sports dietitian. Athletes represented 10 sports: basketball, golf, lacrosse, rowing, soccer, softball, tennis, track/field, volleyball, and wrestling. Of the total sample, 60.1% were actively working with a sports dietitian. The authors designed a survey questionnaire using two sports dietitians and athletic staff from the universities as a review and pilot group for the study. The questionnaire contained 62 questions covering nine sections: sport participation, general eating habits, breakfast, hydration, nutritional supplements, post-workout nutrition, nutrition during team trips, nutrient periodization, and demographic information. Of the questions, 25 were closed-ended, 22 interval, 7 multiple choice, and 8 open-ended. The survey was administered during a scheduled testing session and all completed surveys were placed into sealed envelopes to ensure anonymity. The data were analyzed to present descriptive data sorted by the athlete's source of nutritional information and by sex. Analysis consisted of descriptive statistics and 2-way Pearson X2 analyses. All analysis was done using SPSS version 22 (IBM Corp, 2013).

WEIGHT MANAGEMENT

Lifestyle correlates of being overweight in adults: A hierarchical approach (the SPOTLIGHT project).

Roda C, Charreire H, Feuillet T, et al. *Int J Behav Nutr Phys Act*. 2016; http://dx.doi.org/10.1186/s12966-016-0439-x.

The authors seek to establish a hierarchy of lifestyle-related behaviors as they correlate with adults being overweight, with a secondary aim of examining subgroups and how they differ by socio-demographic and environmental characteristics. The issue was addressed by way of a cross-sectional survey designed as part of the European Union SPOTLIGHT project conducted in five urban regions of Europe. A total of 6,037 individuals participated in that study between February and September 2014, 5,295 of whom included information identifying their body mass index (BMI) and were therefore usable in this study. The 5,295-person sample was 55.8% female with a mean age of 51.7 years, and a mean BMI of 25.2, with 46% deemed overweight. Participants were drawn from Ghent and its suburbs (Belgium), Paris and suburbs (France), Budapest and suburbs (Hungary), Randstad and suburbs (the Netherlands), and Greater London (United Kingdom). Inclusionary criteria included age of 18 years or older. Measures surveyed included: BMI as calculated by dividing self-reported weight by the square of self-reported height (adults were categorized as overweight if their BMI was greater than 25); socio-economic data to include age, sex, educational level; physical activity levels; sedentary behavior levels; eating habits; smoking status; sleep duration; and geographic location of the neighborhood and its population density. All statistical analyses were done using R version 3.2 (CRAN, 2015) and STATA software version 13.0 (Stata Corp, 2013). Because participants live within neighborhoods, the likelihood of being overweight for eating variable was estimated using a multilevel logistic regression model and adjusted for potential confounders.

WELLNESS/PREVENTION

Genetic risk, adherence to a healthy lifestyle, and coronary disease.

Khera A, Connor E, Drake I, et al. *N Engl J Med*. 2016; http://dx.doi.org/10.1056/NEJMoa1605086.

The authors test the hypothesis that both genetic factors and baseline adherence to a healthy lifestyle contribute independently