ABSTRACTS

BEHAVIORAL HEALTH

Associations between sedentary behaviors and dietary intakes among adolescents.

Fletcher E, McNaughton S, Crawford D, et al. *Pub Health Nutr*. 2018: https://doi.org/10.1017/S136898001700372X.

The authors assess the associations between individual and aggregated screen-based behaviors and total sitting time with healthy and unhealthy dietary intake among adolescents. A cross-sectional study was designed to address this issue. A sample of 939 participants was assembled for the study. Mean age of the sample was 16.9 years, and the group was 74.3% female, 12.9% obese. The study draws from baseline cross-sectional data of the Project ADAPT study, a 3-year longitudinal study in Australia that tracked behaviors of youth age 16 and older, August 2013 through June 2015. Participants were recruited from secondary schools throughout Australia. Baseline surveys and telephone follow-up interviews were used throughout the period. Sedentary behavior was measured by the International Physical Activity Questionnaire—Long Form. Total time spent watching television or using a computer on both weekdays and weekends was self-reported. Dietary intake was likewise self-reported in terms of fresh fruits and vegetables, as well as sugary beverages. Covariates included age, sex, body mass index, participants' location, recruitment method, and parental education level. Statistical analysis was performed using STATA/SE 14.0 (Stata Corp, 2015). The authors report that watching television more than 2 hours per day was positively associated with consumption of sugary beverages and discretionary snacks. Meanwhile, computer use in excess of 2 hours a day was inversely associated with fruit and vegetable intake and positively associated with fast food consumption.

CLINICAL NUTRITION

Evaluation of malnutrition development risk in hospitalized children.

Beser O, Cokugras F, Erkan T, et al. *Nutrition*. 2018; https://doi.org/10.1016/j.nut.2017.10.020.

Researchers examine relationships between malnutrition risk and the efficacy of clinical screening tools. A prospective, observational, multicenter study was conducted to investigate this. A sample of 1,513 participants was used. The study was conducted between March and July 2015 by 63 investigators from the TUHAMAR Study Group, using hospitalization data from 37 Turkish pediatric hospitals in 26 cities. Patients aged 1 month to 18 years admitted to pediatric wards for at least 24 hours were invited to participate. Exclusion criteria were critical illness and those admitted to the emergency department; patients receiving steroids and other appetite stimulants or enteral nutrition treatment; and patients with cerebral palsy or genetic disorders. The resulting sample had a median age of 4.4 years and was 56.4% male, and 47.5% had an underlying chronic disease; the median length of stay was 6.0 days. On admission, participants were assessed for demographic and socioeconomic characteristics, weighed, and measured for height. Complete medical histories were accessed. Risk for malnutrition was evaluated by using the proprietary Screening Tool Risk on Nutritional Status and Growth (STRONGkids) questionnaire and the Pediatric Yorkhill Malnutrition Score (PYMS). The PYMS includes anthropometric measures, and STRONGkids includes a subjective clinical assessment of nutritional status. Total scores for each tool were computed across age groups by using the validated tools. Subjects were separated into age groups of 1 to 12 months, 13 to 48 months, 49 to 84 months, 84 to 144 months, and greater than 144 months for the analyses. Statistical analysis was performed by using SPSS software version 18.1 (IBM Corp., 2017). The researchers report that the results of STRONGkids showed that the proportion of patients with an underlying chronic disease was higher for patients at risk of malnutrition than for patients at medium or low risk. The PYMS results showed that patients at high risk for malnutrition have more chronic diseases than the patients at medium or low risk.

CULINARY

The effect of prunes on stool output, gut transit time and gastrointestinal microbiota: A randomized controlled trial.

Lever E, Scott S, Louis P, et al. *Clin Nutr*. 2018; https://doi.org/10.1016/j.clnu.2018.01.003.

Investigators test the hypothesis that prune consumption will affect stool weight in healthy adults with infrequent bowel movements and low fiber intake. A parallel-group, randomized controlled trial with three treatment arms was designed to address this issue. A sample of 120 participants was assembled for the study. Participants were recruited from universities around London, England. Inclusion criteria were: aged 18 to 65 years with a stool frequency of three to six bowel movements per week. Exclusion criteria were: functional constipation or irritable bowel syndrome determined by Rome III criteria, habitual high fiber intake, prune dislike or intolerance, use of medications that might interfere with the study, use of laxatives or other fiber supplements, major surgery, eating disorders, pregnancy or lactation, and abdominal exposure to ionizing radiation within 12 months. The 120 participants were randomized into a 40-subject control group (no prunes), a 40-subject group using 80 g/day, and a 40-subject group using 120 g/day. The sample demographics in terms of control, 80 g/day, and 120 g/day were, respectively, mean age 36.5, 33.5, and 34.4 years; 70%, 73%, and 73% female; body mass index (BMI) of 25.4, 23.9, and 25.2; stool weight of 110.9 g/day, 87.9 g/day, 89.9 g/day; stool frequency per week 5.4, 5.1, and 4.9. The trial used pitted prunes, which were provided to the participants in 80-g or 120-g sealed bags.

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Participants consumed their intervention every day for 4 weeks. Primary outcome was stool weight with secondary outcomes of stool frequency and consistency. All outcomes were measured at baseline and week 4 of the intervention. During each 7-day stool collection period, one fresh stool sample was collected from subjects within 1 hour of evacuation. The stool was immediately homogenized in a stomacher. Statistical analysis was conducted by using SPSS Statistics version 22 (IBM Corp, 2013). Investigators report greater increases in the stool weight of both interventions relative to the control.

ONCOLOGY

The prediction of deterioration of nutritional status during chemoradiation therapy in patients with esophageal cancer.

Rietveld S, Nierop J, Ottens-Oussoren K, et al. *Nutr Cancer*. 2018; https://doi.org/10.1080/01635581.2018.1412481.

Researchers explore whether parameters of pretreatment nutritional status, next to weight loss and body mass index (BMI), may predict deterioration in nutritional status during chemoradiation therapy (CRT) in esophageal cancer patients. A prospective cohort study was designed to address this issue. A sample of 101 participants was assembled. The mean age was 65.3 years, and and the group was 73% male, with a mean BMI of 26.5. The sample was recruited from consecutive patients at a university hospital in Amsterdam between August 2006 and January 2016 for curative treatment of esophageal cancer. A total of 213 patients were eligible for CRT during that period, but 130 were excluded because of missing data. The primary outcome was deterioration in nutritional status during CRT, which was defined as a decline of 5% during CRT or a decline of fat free mass (FFM) of 1.4 kg. Patients were treated with CRT per CROSS trial protocol and received routine dietetic care. Patient, tumor, and treatment characteristics and American Society of Anesthesiologists score, number of dietetic consultations, and use of supplements were extracted from medical records. Body weight before and after CRT was measured within 0.1 kg on a calibrated digital scale, and height was measured using a stadiometer. Fat-free mass, fat mass, fat-free mass index, fat mass index, and phase angle were calculated using bioelectrical impedance analysis measurements. Handgrip strength was measured with a hydraulic hand dynamometer. Logistic regression analysis was performed to create a prediction model for deterioration in nutritional status during CRT. All statistical analysis was performed using SPSS version 22 (IBM Corp, 2013). The authors report that nutritional status deteriorated in 49% of the patients during CRT, with the only predictor for deterioration being fat-free mass index. Patient with a higher fat free mass index were reported to be at increased risk.

PEDIATRIC

A home visiting parenting program and child obesity: A randomized trial.

Ordway M, Sadler L, Holland M, et al. *Pediatrics*. 2018; https://doi.org/10.1542/peds.2017-1076.

Researchers developed a randomized controlled trial to examine obesity among children of mothers participating in a 27-month intervention. A sample of 158 children was used. Mothers were randomly assigned to intervention (n=92) and control groups (n=66). The mean maternal age was 19.6 years in the intervention group; 19.4 in the control. The intervention group was 5.4% white, 77.2 Hispanic/Latino, and 14.1% African-American. The control group was 7.6% white, 59.1% Hispanic/Latino, and 33.3% African-American. The intervention group was 79.3% never married, compared with 94% in the control. Data were collected between 2002 and 2008 and between 2008 and 2016 at two inner-city community clinics. Inclusion criteria were