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FROM THE ACADEMY New in Review



BEHAVIORAL HEALTH

Hungry to learn: The prevalence and effects of food insecurity on health behaviors and outcomes over time among a diverse sample of university freshmen.

Bruening M, Woerden I, Todd M, Laska M. Int J Behav Nutr Phys Act. 2018; https://doi.org/ 10.1186/s12966-018-0647-7.

The researchers examine associations between food insecurity and health outcomes among university freshmen. A longitudinal study was designed to address this issue. A sample of 1,138 participants was utilized. The sample was 65% female and 51% white, all firstyear college students. This study is based on a secondary analysis of a National Institutes of Health-funded Social Impact of Physical Activity and Nutrition in College study utilizing freshmen students in six residence halls on three campuses of a single metropolitan university during the fall and spring of 2015-2016 academic year. Participants completed surveys and were measured at regular intervals including August, November, January, and April of that period. In addition to anthropometric variables measured, the web-based surveys detailed selfreported eating, alcohol, physical activ-ity, sleep, and mental health. Food insecurity was measured by the US Department of Agriculture's six-item food security short form. Participants' weight and height were measured by trained research assistants. Eating behaviors were assessed with a 26-item Dietary Screener Questionnaire for consumption of major food groups and alcohol behaviors. Physical activity was measured by the Godin-Shepard Physical Activity assessment, and specific questions were adapted to address issues of mental health. Complete sociodemographic information was taken from all participants. Outcomes measured were the prevalence of food insecurity over time and how it was associated with health behaviors and outcomes at each of the points. All four time analyses were conducted using R version 3.3.2 (R Foundation, 2016) and Mplus version 7.4 (Mplus, 2015). The researchers report that food insecurity was significantly higher at the end of each semester.

DIABETES CARE

Impact of malnutrition on survival and healthcare utilization in Medicare beneficiaries with diabetes: A retrospective cohort analysis.

Ahmed N, Choe Y, Mustad V, et al. *BMJ Open Diabetes Res Care.* 2018; 6(1):e000471.

The authors examine the impact of preexisting malnutrition on survival and economic implications in diabetic seniors. A retrospective observational study was designed to address this issue. A sample of 15,121,131 patients was established using data from the Centers for Medicare and Medicaid Services (CMS). Data from beneficiaries with a diagnosis of diabetes between January 1, 1999 and December 31, 2014 was procured with an inclusionary criteria established requiring they had been in the database at minimum 1 year prior to diagnosis. Based on that, the cohort was then divided into two groups: malnourished (MNG) and normonourished (NNG). This was established using International Classification of Diseases Ninth Edition coding and resulted in an MNG group of 801,272 and NNG group of 14,319,859. Baseline demographics for the sample were mean age of MNG beneficiaries 75.4 years, 57.63% were female, 74.93% were white, and 18.1% were black. For the NNG beneficiaries, mean age was 71.3 years, 52.79% were women, 79.24% were white, and 12.58% were black. The primary outcome variable for the retrospective study was survival time from date of diagnosis to death, or censored at December 31, 2014. Secondary variables included annual health care utilizations; annual total costs; annual number of acute and inpatient; skilled nursing facility and hospice covered days; and annual number of hospital readmissions. Three primary analyses were performed: first, an analysis evaluating the effect of common conditions on survival; the second analysis evaluated the effect of malnutrition within each common condition by using a similar approach; the third analysis compared MNG and NNG cohorts in terms of annual health care utilizations using a propensity score-matched sample. All statistical analysis was performed using SAS version 9.4 (SAS Institute, 2013) and SAS Enterprise Guide V.7.1 (SAS Institute, 2014). The authors report finding that malnutrition is a significant comorbidity affecting survival and health care costs in CMS beneficiaries with diabetes.

PEDIATRIC

Embedding weight management into safety-net pediatric primary care: Randomized controlled trial.

Wylie-Rosett J, Groisman-Perelstein A, Diamantis P, et al. *Int J Behav Nutr Phys Act.* 2018; https://doi.org/10.1186/s12966-017-0639-z.

Researchers compare a 12-month, bilingual weight management intervention with two primary care pediatricians vs standard care, adding a skills-based core module and post-core support. A twoarm, randomized, controlled, parallelgroup trial was designed to address this issue. A sample of 360 participants was established for the trial. Inclusion criteria: children ages 7 to 12 years with a body mass index (BMI) at or greater than the 85th percentile of the US Centers for Disease Control BMI for age and sex. Exclusion criteria included chronic illness, impairments affecting safety, medications affecting body weight, and participation in another weight study within the prior 2 years. The sample's mean age was 9.3 years, and 48.6% were male, 74% were Latino/ Hispanic, 17.5% were black, and 8.3% were white, Asian, and others. The sample was randomized into a 182participant sample receiving standard care vs 178 receiving the intervention. The control arm received a 12-month treatment based on the American Academy of Pediatrics evidence-based recommendations administered by two bilingual pediatricians. To augment this standard of care, participants were given the Kid-Weight, Activity, Variety and Excess (WAVE) Get Healthy card game, which incorporates adaptations of the Youth Behavioral Risk Factor Survey. The intervention added components provided by a bilingual multidisciplinary team including a dietitian, a social worker, and a fitness instructor. The components included a Skill Building Core of eight weekly sessions and Post-Core Support. Pediatricians and researchers were blinded to randomized

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treatment allocation. Anthropometric measurements were obtained at baseline and 12-month post-randomization. BMI was assessed at 3, 6, and 9 months. All child health history and demographic information was taken via survey. Systolic and diastolic blood pressures were measured three times throughout the trial. Fasting glucose, triglyceride, total cholesterol, low-density lipoprotein cholesterol, and high-density lipoprotein cholesterol were also measured. All analyses were conducted using SAS version 9.4 (SAS Institute, 2013). The researchers report mean BMI declined in both arms without significant difference, but the intervention did result in greater improvements in total cholesterol and other measures.

PUBLIC HEALTH

Intermittent energy restriction improves weight loss efficiency in obese men: The MATADOR study.

Burne N, Sainsbury A, King N, et al. *Int J Obes*. 2018; https://doi.org/10.1038/ijo.2017.206.

Researchers test the hypothesis that intermittent energy restriction (ER) results in more efficient weight and fat loss relative to continuous ER. A singlecenter, parallel-group, randomized controlled trial was designed to test this hypothesis. A sample of 51 men was used. The study was conducted in Australia, and eligibility requirements were: being male; aged 25 to 54 years; having a body mass index (BMI; calculated as kg/m^2) classified as obese (ie, 30 to 45); being weight stable; and being sedentary (defined as <60 minutes of structured physical activity per week). Median age was 39.5 years, median BMI was 34.1, and median body fat percentage was 39.0. Participants undertook a 4-week baseline stabilization phase to determine daily energy needs and then were randomized into 16 weeks of ER delivered as either: control group using continuous daily ER; or the intervention group, which used 16 weeks of ER as 8×2-week blocks interspersed with 7×2-weeks of energy balance. Both groups then completed an 8-week postweight loss energy balance phase. Participants in both groups received 67% of their individual weight maintenance energy requirement during the weight reduction phases. Participants in both groups were provided all meals, as well as morning and afternoon snacks for the duration of the study, prepared under the direction of a dietitian and delivered to their homes each week. The planned macronutrient distribution in both diets was 25% to 30% fat, 15% to 20% protein, and 50% to 60% carbohydrates. Participants maintained daily food diaries for the duration of the study. Body weight, composition, and resting energy expenditure were measured at the start and end of the initial baseline, after every 4 weeks of ER, and at weeks 1, 2, 4, and 8 of the 8-week post-ER phase, as well as at follow-up 6 months later. All analyses were performed using the STATA statistical package version 14.2 (StataCorp LLC, 2016). The researchers report that greater fat and weight loss was achieved with intermittent ER.

RESEARCH

Associations of omega-3 fatty acid supplement use with cardiovascular disease risks: Meta-analysis of 10 trials involving 77,917 individuals.

Aung T, Halsey J, Kromhout D. JAMA Cardiol. 2018; https://doi.org/10.1001/jamacardio. 2017.5205.

Researchers assess the associations of supplementation with omega-3 fatty acid on fatal cardiovascular disease (CVD), stroke, and other major vascular events. A meta-analysis was performed to address this issue. A sample of 10 trials involving 77,917 participants was created. The Download English Version:

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