ILSI North America

Nutrition Briefs

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Cardiovascular Disease

Colors of Fruits and Vegetables and 3-Year Changes of Cardiometabolic Risk Factors in Adults: Tehran Lipid and Glucose Study

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European Journal of Clinical Nutrition, Vol. 69, No. 11; pp. 1215–1219, 2015

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Link to full text: Click here

Significance: Higher intake of red/purple fruits and vegetables may be related to lower weight and abdominal fat gain, and yellow, green and white fruits and vegetables may be related to lipid parameters.

The associations of colors of fruit and vegetable (FV) subgroups, with 3-year changes of cardiometabolic risk factors, were investigated in this longitudinal study conducted in the framework of Tehran Lipid and Glucose Study, between 2006–2008 and 2009–2011, on 1272 adults. The mean age of men and women at baseline was 39.8±12.7 and 37.3±12.1 years, respectively. Mean total intake of FV, red/purple, yellow, green, orange and white FV was 706±337, 185±95, 141±91, 152±77, 141±87 and 22±18 g/day, respectively. In men, 3-year changes of weight (β=−0.13, P=0.01) and waist circumference (β=−0.14, P=0.01) were related to intake of red/purple FV; the yellow group was inversely associated with 3-year changes of total cholesterol (β=−0.09, P=0.03) and HDL-cholesterol (β=−0.11, P=0.03). Consumption of green and white FV was inversely related to abdominal fat gain, and atherogenic lipid parameters in men (P<0.05). In women, higher intake of red/purple FV was associated to lower weight and abdominal fat gain, fasting serum glucose and total cholesterol (P<0.05); yellow FV was also related to 3-year weight gain (β=−0.11, P=0.01). Various colors of fruit and vegetable subgroups had different effects on cardiometabolic risk factors.

Egg Consumption and Risk of Heart Failure, Myocardial Infarction, and Stroke: Results From 2 Prospective Cohorts

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American Journal of Clinical Nutrition, Vol. 102, No. 5; pp. 1007–1013, 2015

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Significance: Daily egg consumption was not associated with risk of myocardial infarction or any stroke type in either men or women or with heart failure in women.

This study examined whether egg consumption is associated with incidence of heart failure (HF), myocardial infarction (MI), or stroke types in prospective cohorts of 37,766 men (Cohort of Swedish Men) and 32,805 women (Swedish Mammography Cohort) who were free of cardiovascular disease (CVD). During

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13 y of follow-up, 1628 HFs, 3262 MIs, 2039 ischemic strokes, and 405 hemorrhagic strokes were ascertained in men and 1207 HFs, 1504 MIs, 1561 ischemic strokes, and 294 hemorrhagic strokes were ascertained in women. There was no statistically significant association between egg consumption and risk of MI or any stroke type in either men or women or HF in women. In men, consumption of ≤6 eggs/wk was not associated with HF risk; however, daily egg consumption (≥1/d) was associated with a 30% higher risk of HF (RR: 1.30; 95% CI: 1.01, 1.67). Egg consumption was not associated with any CVD outcome in individuals with diabetes.

Diabetes

The Evaluation of Inflammatory and Oxidative Stress Biomarkers on Coffee–Diabetes Association: Results From the 10-Year Follow-Up of the ATTICA Study (2002–2012)

E. Koloverou, D.B. Panagiotakos, C. Pitsavos, C. Chrysohoou, E.N. Georgousopoulou, A. Laskaris et al. and The ATTICA Study group

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Significance: This work highlights the significance of long-term habitual coffee drinking against diabetes onset.

This study investigated the association between coffee drinking and diabetes development and potential mediation by oxidative stress and inflammatory biomarkers in a random sample of 1514 men (18–87 years old) and 1528 women (18–89 years old) were selected to participate in the ATTICA study (Athens metropolitan area, Greece). During follow-up, 191 incident cases of diabetes were documented (incidence 13.4% in men and 12.4% in women). After various adjustments, individuals who consumed ≥250 ml of coffee (≈1.5 cup) had 54% lower odds of developing diabetes (95% CI: 0.24, 0.90), as compared with abstainers. A dose-response linear trend between coffee drinking and diabetes incidence was also observed (P for trend=0.017). When controlling for several oxidative stress and inflammatory biomarkers, the inverse association between habitual coffee drinking and diabetes was found to be mediated by serum amyloid-A levels.

Blood Pressure

A Randomized Trial of Intensive Versus Standard Blood-Pressure Control

The SPRINT Research Group

New England Journal of Medicine, Vol. 373, No. 22; pp. 2103–2116, 2015

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Significance: Targeting a systolic blood pressure of <120 mm Hg as compared with <140 mm Hg in patients at high risk for cardiovascular events but without diabetes, resulted in lower rates of fatal and nonfatal major cardiovascular events and death from any cause.

This randomized, controlled, open label trial compared the benefit of treatment of systolic blood pressure (SBP) to a target of <120 mm Hg with treatment to a target of <140 mm Hg. Subjects with SBP ≥130 mm Hg and an increased cardiovascular risk, but without diabetes, (n=9361) were randomized to a SBP

target of <120 mm Hg (intensive treatment) or a target of <140 mm Hg (standard treatment). The primary composite outcome was myocardial infarction, other acute coronary syndromes, stroke, heart failure, or death from cardiovascular causes. At 1 year, mean SBP was 121.4 mm Hg in the intensive-treatment group and 136.2 mm Hg in the standard-treatment group. The intervention was stopped early after a median follow-up of 3.26 years owing to a significantly lower rate of the primary composite outcome in the intensive-treatment group than in the standard-treatment group (1.65%/year vs. 2.19%/year; hazard ratio with intensive treatment, 0.75; 95% CI, 0.64 to 0.89; P<0.001). All-cause mortality was also significantly lower in the intensive-treatment group (hazard ratio, 0.73; 95% CI, 0.60 to 0.90; P=0.003).

Sugar-Sweetened Beverages

Consumption of Soft Drinks and Health-Related Quality of Life in the Adult Population

A. Lana, E. Lopez-Garcia, F. Rodríguez-Artalejo

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Significance: Soft drink consumption did not have a beneficial effect on either the physical or mental dimensions of health-related quality of life.

This study assessed the association between consumption of soft drinks and health-related quality of life (HRQL), as a proxy of well-being, in 8417 adults aged 18-60 from Spain. Habitual soft drink consumption was assessed with a validated diet history at baseline. HRQL was measured using the SF-12 questionnaire at baseline and in a subsample of 2132 study participants in 2012. In cross-sectional analyses at baseline, those who drank ≥1 serving/day of sugar-sweetened beverage (SSB) had a lower (worse) score on the physical composite summary (PCS) of the SF-12 (adjusted linear regression coefficient: −1.08; 95% CI: −1.60 to −0.54) than those who drank <1 serving/week. Results were similar among individuals <35 years (−1.06; 95% CI: −1.79 to −0.32), those who were not dieting (−1.21; 95% CI: −1.80 to −0.62), those who did not lose >5 kg in the previous 4 years (−0.79; 95% CI: −1.87 to 0.29), and in those without morbidity (−1.18; 95% CI: −1.91 to −0.46). Neither SSBs nor artificially sweetened beverages (ASBs) showed an association with the mental composite summary (MCS) of the SF-12. In the prospective analyses, no association was observed between baseline consumption of SSBs or ASBs and the changes in the PCS and MCS score from 2008/2010 to 2012.

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