OMICS International
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Yanni Papanikolaou et al., J Food Process Technol 2015, 6:7
http://dx.doi.org/10.4172/2157-7110.S1.020

6th Global Summit and Expo on
Food & Beverages
August 03-05, 2015 Orlando-FL, USA

Certain grain food consumption patterns are associated with improved nutrient intakes and reduced risk of being overweight or obese in American children

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The current analyses identified commonly consumed grain patterns in US children (2-18 years old; N=8,367; 4,263 males/4,104 females) and compared nutrient intakes and obesity-related outcomes of subjects in various grain consumption patterns to those not consuming grains. Data were from the National Health and Nutrition Examination Survey (NHANES; 2005-2010) and cluster analyses isolated the grain patterns: Breads/rolls, crackers/salty snacks, quick breads, pancakes/waffles/French toast/other grains, cakes/cookies/pies, pasta/cooked cereals/rice, cereals and no grains. Males consuming pasta/cooked cereals/rice had lower total fat intake (69±2 vs. 80±4g/d; p=0.008) while females consuming breads/rolls, cereals, pasta/cooked cereals/rice, crackers/salty snacks, pancakes/waffles/French toast/other grains had less total fat vs. no grains (64±1, 61±2, 59±1, 67±1, 63±1, 67±1 vs. 71±1g/d; all $p<0.05$). Several grain patterns resulted in significantly less saturated fat intake vs. no grains [Males: pasta/cooked cereals/rice (-6 g/d), crackers/salty snacks (-3 g/d), pancakes/waffles/French toast/other grains (-3 g/d); Females: breads/rolls (-2 g/d), cereals (-3 g/d), pasta/cooked cereals/rice (-5 g/d), crackers/salty snacks (-2 g/d), pancakes/waffles/French toast (-3 g/d)]. Males and females had greater dietary fiber intake when consuming cereals (2-3 g/d), crackers/salty snacks (2 g/d) and quick breads (3 g/d) while only females had increased fiber when consuming breads/rolls (2 g/d), vs. no grains. In males, BMI Z-scores were lower in all patterns except cakes/cookies/pies while in females, lower scores resulted in all patterns except cakes/cookies/pies and cereals. Males and females consuming pasta/cooked cereals/rice had a reduced risk for being overweight or obese vs. no grains [Odds Ratios (confidence intervals)=0.42 (0.25-0.72) and 0.40 (0.17-0.92)] respectively). A variety of grain patterns intake in children was associated with improved nutrient intakes and obesity-related outcomes.

Biography

Yanni Papanikolaou previously worked for the Kellogg Company as Director of Nutrition Marketing in the USA and Associate Director for Nutrition and Regulatory Affairs in Canada. At Kellogg, he led strategy development and leveraged nutrition science to influence government bodies on policy development and in the creation of evidence-based consumer and health professional messaging. He holds a Masters of Health Science in Public Health Nutrition and is completing a PhD at University of Toronto focusing on nutrition and brain health. He is an accomplished, peer-reviewed author in scientific/medical journals and books chapters and has presented at major nutrition conferences worldwide.

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