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Lifestyle and behavioral determinants of long-term weight change in women

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Objective: To describe the determinants of 12-year weight change among a cohort of middle-aged women.

Methods: In 1991/1992, 49,259 women across Sweden were recruited into a cohort. In 2003, 34,402 (73%) completed a follow-up survey. Demographic, lifestyle and health characteristics, including weight were collected using baseline and follow-up surveys and twelve-year weight change and substantial weight gain ($\geq +5.0$ kilogram [kg]) were calculated; association between baseline characteristics and odds ratios (OR) with 95% confidence intervals (CI) of substantial weight gain were estimated.

Results: The majority (81%) of women experienced weight gain during the twelve-year follow-up. Being above average weight (64.5 kg) at baseline [OR=1.20, 95% CI: 1.14, 1.26] and smoking 1-9 [OR=1.10, 95% CI: 1.01, 1.20], 10-19 [OR=1.30, 95% CI: 1.21, 1.39], or ≥ 20 cigarettes daily [OR=1.17, 95% CI: 1.04, 1.32] increased a woman's odds of experiencing substantial weight gain. However, risk of substantial weight gain was reduced among women 45-50 years of age [OR=0.79, 95% CI: 0.73, 0.85], women reporting high alcohol consumption [OR=0.90, 95% CI: 0.83, 0.98], and those with medium [OR=0.93, 95% CI: 0.87, 1.00] or high [OR 0.83, 95% CI: 0.77, 0.90] physical activity levels. Smoking cessation

(OR=1.88, 95% CI: 1.68, 2.11) and decreasing physical activity (OR=1.58, 95% CI: 1.48, 1.68) were associated with increased odds of substantial weight gain as compared to women who reported no smoking at baseline and follow-up and women who reported no changes in physical activity, respectively.

Conclusions: The majority of women experienced weight gain during middle-age. Women who start middle-age at an above average weight or as a cigarette smoker may be uniquely challenged in their weight management efforts, highlighting the value of population-specific determinants of weight gain in guiding obesity prevention efforts in women.

Speaker Biography

Dr. El Reda has over 15 years of experience in public health practice across a variety of settings, such as city, county, state, federal, and private sector in the United States. Most recently, she has been focused on the application of epidemiologic and statistical principles in the assessment of primary care practice delivery for 4.5 million insured patients in Michigan using health insurance claims data. In addition, she has been an Adjunct Assistant Professor with Michigan State University's College of Human Medicine teaching graduate courses in epidemiology, biostatistics, and health informatics since 2012. She is an alumni of the Centers for Disease Control and Prevention's Epidemic Intelligence Service and has published on the topics of maternal and child health, primary care practice transformation, disease prevention programs, and infectious disease outbreaks. She is currently an Assistant Professor with the faculty of Public Health at Kuwait University.

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