conferenceseries.com

2nd World Congress on

Public Health & Nutrition

March 22-23, 2017 | Rome, Italy

THE UTILITY OF RED CELL DISTRIBUTION WIDTH AS A PARAMETER FOR CALCULATING INDICES OF ALLOSTATIC LOAD

Ghalib A Belloa and **Gerard G Dumancasb**
aIcahn School of Medicine at Mount Sinai, USA
bLouisiana State University, USA

Allostatic Load is a construct used To quantify the cumulative burden of exposure to stress that, over the course of an individual's life, exert a toll on the body's physiological functions, predisposing to the development of various chronic ailments and conditions. The systemic physiological dysregulation resulting from increasing allostatic load can be quantified through chemical imbalances in various organ systems. Many studies have attempted to do this by combining multiple clinical parameters (e.g. albumin, C-reactive protein, cholesterol, etc.) to produce univariate indices that serve as measures of allostatic load. The general validity of these indices has been confirmed through studies showing they are good predictors of adverse health outcomes, mortality, hospital utilization and age-related pathologies. They have also used to demonstrate the existence of socioeconomic and demographic health disparities. In this study, we show the value of including red blood cell distribution width (RDW) among the panel of clinical parameters used to calculate allostatic load. RDW quantifies the degree of heterogeneity in erythrocyte volume and has shown strong correlations with mortality and a broad spectrum of diseases. A review of the existing literature on allostatic load reveals its underutilization in this area, despite being a standard component of blood count panels. Using Cox Proportional Hazards regression and Adaptive Index models, we show that calculating allostatic load using RDW (in addition to the common set of clinical parameters typically used in most studies) yields a significantly improved index. It demonstrates a superior ability to predict mortality, health status and comorbidities than the standard version currently in use.

LIFESTYLE AND BEHAVIORAL DETERMINANTS OF LONG-TERM WEIGHT CHANGE IN WOMEN

Darline K El Redaa
aKuwait University, Kuwait

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 (≥+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 a 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.

J Community Med Health Educ 2017
ISSN: 2161-0711, JCMHE an open access journal

Public Health 2017
March 22-23, 2017

Volume 7, Issue 1 (Suppl)

Page 75