Relationship between Body Fat Distribution and Vitamin D status among University Employees at A Private University in Lebanon: a Cross-Sectional Study

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Abstract:

Background: High prevalence of suboptimal vitamin D status has paralleled the obesity epidemic; thus there has been a growing scientific interest in understanding the relationship between serum vitamin D levels and adiposity. Given the 1) high prevalence of suboptimal vitamin D status in Lebanon 2) lack of studies on the association between a direct measure of body fat distribution (BFD) and serum vitamin D levels 3) lack of simultaneous control for important confounding variables, including body fat percentage (BFP), our study is the first to explore the association between a direct measure of BFD (upper-to-lower body fat ratio- ULBFR) and vitamin D status, independent of BFP.

Methods: A cross-sectional study was conducted among employees at Notre Dame University-Louaize, Lebanon. ULBFR was calculated as: (trunk fat mass (kg)) / (fat mass in legs (kg)). Serum 25-hydroxyvitamin D levels were measured using ELISA and vitamin D status was determined according to the US Endocrine Society guidelines. BFP was measured using bioelectrical impedance analysis.

Results: A total of 344 employees participated in the study. Among premenopausal women, significant associations were found between suboptimal vitamin D status and ULBFR; premenopausal women whose ULBFRs fell in the third tertile were found to have about 4 times higher odds of developing suboptimal vitamin D status as compared to those whose ULBFRs fell in the first tertile, after controlling for confounders, including BFP. Such an association was not, however, found in men.

Biography:

Jocelyne Matar Boumosleh is an assosciate Professor at the Faculty of Nursing and Health Sciences at Notre Dame University (NDU)-Louaize. Dr. Boumosleh obtained her

MPH from American University of Beirut and her PhD from University of Pittsburgh, Graduate School of Public Health, and completed her postdoctoral training at University of Texas Southwestern Medical Center in Dallas. Specialized in nutritional epidemiology and non-communicable diseases (NCDs), she is an epidemiologist with extensive experience in research design, the conduct of epidemiologic studies, data analysis, grant writing, and scientific writing. Her research interests include Breast Cancer/PCOS/ Metabolic Syndrome etiology and risk assessment. Having held academic appointments at University of Balamand, Beirut and Notre Dame University, Louaize, she has been involved in graduate (master's and medical students) and undergraduate teaching and research.

Publication of speakers:

1. Chen TC, Chimeh F, Lu Z, Mathieu J, Person KS, Zhang A, et al. Factors that influence the cutaneous synthesis and dietary sources of vitamin D. Arch Biochem Biophys. 2007;460(2):213–7.
2. Ross AC, Manson JE, Abrams SA, Aloia JF, Brannon PM, Clinton SK, et al. The 2011 report on dietary reference intakes for calcium and vitamin D from the institute of medicine: what clinicians need to know. J Clin Endocrinol Metab. 2011;96(1):53–8.

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