

Association of Dietary and Lifestyle Inflammation Score with Cardiorespiratory Fitness

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Abstract

Objective: We aimed to assess the potential association of dietary (DIS) and lifestyle inflammation score (LIS) and their joint association (DLIS) with cardiorespiratory fitness (CRF) in Tehranian adults. **Methods:** A total of 265 males and females aged 18-70 years (mean \pm SD: 36.9 \pm 13.3) were entered in the present cross-sectional study. The DIS was calculated by the use of data from 18 anti- and pro-inflammatory dietary components, and the LIS by three non-dietary components including physical activity, smoking status and general adiposity, with higher scores indicating a more pro-inflammatory diet and lifestyle, respectively. The DLIS was calculated by summing the DIS and LIS. CRF was assessed by the Bruce protocol. The odds ratio (OR) and 95% confidence interval (CI) of CRF across tertiles of the DIS, LIS, and DLIS were estimated by logistic regression analysis with considering age, gender, energy intake, marital and education status and occupation as confounders. **Results:** The DLIS ranged from -2.10 to 0.38 (mean \pm SD: -1.25 \pm 0.64). In the model that controlled for all variables, the ORs of CRF for the second and third tertiles of the DLIS as compared to the first tertile were 0.42 (95%CI: 0.20, 0.90) and 0.12 (95%CI: 0.05, 0.32), respectively (P-trend <0.001). There was strong inverse association between the LIS and CRF (ORthird vs first tertile: 0.12, 95%CI: 0.05, 0.32). There was no association between DIS and CRF. **Conclusion:** Having a more inflammatory lifestyle was strongly inversely associated CRF. More research is needed to confirm the present findings.

Title page

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