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Neutrophil to Lymphocyte Ratio (NLR) reflects the balance between the innate (neutrophils) and adaptive (lymphocytes) immunity. Though NLR is a strong predictor of mortality in the general population, the distribution of NLR and its association with mortality has not been evaluated in families with exceptional longevity. Hence, we evaluated this question in the Long Life Family Study, a family based study of exceptional longevity. We used data from offspring of long lived (n=2065) family members and spousal controls (n=673). We used multivariate linear regression models adjusted for age, family relatedness, sex, field center, BMI and comorbidities (diabetes, CVD, cancer) to evaluate differences in NLR between long lived family members and spousal controls. Cox proportional hazard models were used to examine the association between NLR and mortality. 157 (7.6%) offspring in long lived families and 68 (10.1%) spousal controls were deceased during 12 years of follow up. NLR was similar among offspring in long lived families and spousal controls (1.96±1.06 vs.1.98±1.28; p=0.64). There was a significant positive association between NLR and overall mortality [HR: 1.3, 95% CI (1.01, 1.67)), p:0.04]. There was no statistically significant difference in this association among offspring in long lived families and spousal controls (p for interaction =0.16). The association between NLR and overall mortality was no longer significant [HR: 1.24; p:0.36] after adjustment for IL-6 and hsCRP. These results suggest that NLR may be a predictor of mortality in families with exceptional longevity though this association may not be independent of other inflammatory biomarkers.

RACIAL DIFFERENCES IN GLUCOSE HANDLING AND FUNCTION WITH OBESITY REDUCTION: PRELIMINARY FINDINGS

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Blacks have higher rates of obesity and are twice as likely to develop diabetes as non-Hispanic whites. Obesity reduction can improve metabolic health, but physical function and glucose handling may be threatened by concomitant loss of muscle mass. These preliminary findings from a 4-mo. randomized controlled trial assess the racial differences in glucose handling and physical function in obese, older adults with prediabetes (Fasting Plasma Glucose (FPG) ≥95<126 mg/dL or HbA1c 5.7-6.4%) following obesity reduction. At 4 mo. endpoint, participants (n = 31; age = 68.1±5.4 years, BMI =36.0±4.7 kg/m2) had reduced (p<0.05) body weight in both Blacks (5.1%) and Whites (4.1%); HbA1c levels were also reduced (Blacks = -0.3 ±0.3; Whites = -0.1±0.3) with no difference by race. However, FPG was reduced for Blacks compared to Whites (-7.9±9.5 vs. -2.8±6.2 mg/dL; p<0.05). Short Physical Performance Battery (SPPB) score was lower for Blacks than Whites at both baseline (9.8±1.5 vs 10.9±1.2; p<0.05) and 4 mo. (10.17±1.4 vs 11.21±1.3; p<0.05), respectively. A trend towards improvement (p=0.08) in meters walked in 6 minutes was present in both Blacks (13.3±60.8) and Whites (20.0±36.3) with no between-group difference. Interestingly, at baseline, 41% of participants said they modified their behaviors due to a fear of falling despite having a mean SPPB score of 10.3±1.5. Following the intervention, fear of falling was reduced, with 35% of the participants reporting this behavior. Our findings illustrate that modest weight loss improves glucose handling, physical function and perceived fall risk for both Black and White older adults with prediabetes.

SARC-F CAPACITY TO TRACKING SARCOPENIA IN WOMEN FROM MANAUS-AM

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This study aimed to analyze the performance of SARC-F for the identification of sarcopenia in women from Manaus. For the analysis of the performance of the SARC-F, the criteria defined by the EWGSOP (2018) and the SDOC (2019) were considered. The sample consisted of 236 women aged 66.27±5.76 years. In addition to the SARC-F, a dynamometer was used to assess the muscle strength and gait speed was determined on a 2.44 m course. To identify sarcopenia, the following cut-off valueswere used: SARC-F ≥ 4 points; grip strength: EWGSOP <27kg for men and 16kg for women, SDOC <35.5kg for men and <20.0 kg for women; grip over body mass index (BMI, kg/m2) <1.05 for men and 0.79 for women; grip over body weight (BW, kg) <0.45 for men and <0.34 for women; gait speed ≤ 0.8 m/s for both men and women. The results revealed a prevalence of sarcopenia in 54% of the sample. The Kappa statistic intended to analyze the agreement between the SARC-F and the grip strength, the grip strength corrected for BMI or for BM, and the gait speed. The cross-classification analysis showed linear weighted Kappa coefficients near 0 with exception of gait speed (0.264±0.054, agreement in 61.2% of the participants) and grip strength when the cut off is 20 kg (0.248±0.062 - agreement in 63% of the participants). Cross-classification analysis between SARC-F and objective measures of physical capacity (grip strength and gait speed) showed linear weighted Kappa coefficients with slight or fair agreement in women from Manaus.

THE ASSOCIATION OF FREEZER STORAGE TIME WITH VITAMIN K AND VITAMIN D CONCENTRATIONS IN HUMAN BRAIN TISSUE

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Vitamins K and D are present in the human brain and have been implicated in Alzheimer's disease and related dementias