

in a net-sensitivity of 75.3%, and net-specificity of 83.5%. Sequential screening with SCS and GS testing might offer a case finding screening approach appealing to busy clinical settings from feasibility, accuracy, and/or efficiency perspectives for identification of older adults with low SPPB who may benefit from established interventions.

HYPERGLYCEMIA AND INCIDENCE OF FRAILITY IN OLDER MEXICAN ADULTS LIVING IN RURAL AREAS

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Hyperglycemia is the main characteristic of diabetes and is the result of an absolute or partial deficit in the production or action of insulin. Recent evidence suggests that hyperglycemia increases the risk of frailty. This issue is of great importance for the Mexican population given the high prevalence of diabetes, particularly in older adults. Our objective was to analyze the association between hyperglycemia and the incidence of frailty in a cohort of rural older adults in Mexico. Prospective cohort study with 600 rural older adults, with measurements made in 2009, 2013 and 2018. Frailty was defined using the proposal of Fried and colleagues. The determination of glycosylated hemoglobin was performed through the A1CNow® device, with capillary blood; hyperglycemia was defined considering the recommendation of the American Diabetes Association; where values greater than 6.5% (140 mg / dL) of glycosylated hemoglobin were considered hyperglycemia. We used an ordinal logistic regression model to analyze the relationship between hyperglycemia and incidence of frailty. In the baseline measurement (2009), 8.6% of older adults presented frailty. The incidence of frailty was 6.9%. After adjusting for health and sociodemographic characteristics, hyperglycemia was significantly associated with the incidence of frailty (RR = 2.24 P = 0.018). These findings allow us to determine that hyperglycemia is a prognostic factor of the incidence of frailty. Because frailty is preventable, future interventions for the prevention of frailty should consider the presence of hyperglycemia.

DOES PHYSICAL FUNCTION RESPONSE TO INTENTIONAL WEIGHT LOSS IN OLDER ADULTS VARY BY RACE-ETHNICITY?

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The purpose of this study is to explore whether the effect of weight loss on physical function in older adults varies by race/ethnicity. Individual level data from 1369 older, (67.7±5.4 years), obese (BMI: 33.9±4.4 kg/m²), adults (30% male, 21% African American) who participated in eight randomized controlled trials of weight loss were pooled. Studies were 5-6 months in duration and collected baseline demographic and pre/post gait speed (n=1296), short physical performance battery (SPPB; n=866), and grip strength (n=401) data. Treatment effects were generated by weight loss assignment [weight loss (WL; n=764) versus non-weight loss (NWL; n=605)], as well as categorical amount of weight

change (high loss: >-7%, moderate loss: -7 to -3%, and weight gain/stability: <-3%). Analyses were adjusted for age, sex/gender, study, education, baseline BMI, and baseline value of the outcome measure of interest. Race/ethnicity stratified results were presented if the interaction term was p<0.10. A race/ethnicity*weight loss assignment interaction was observed for gait speed (p=0.07), with African Americans experiencing greater weight loss-associated improvement (WL: 0.07±0.01 m/s versus NWL: 0.02±0.01 m/s; p=0.03) compared to Whites (WL: 0.08±0.01 m/s versus NWL: 0.07±0.01 m/s). A race/ethnicity*weight loss amount interaction was also observed for gait speed (p<0.01), with greater weight loss associated with greater improvement in both African Americans and Whites; although, gains were most apparent in African Americans experiencing high loss (0.12±0.02 m/s) compared to gain/stability (0.01±0.01 m/s). The beneficial effects of weight loss on gait speed appear greater in African Americans and are augmented with greater weight loss.

OPERATIONALIZING THE FRAILITY INDEX BASED ON WEARABLE SENSOR TO ASSESS FUNCTIONAL PERFORMANCE IN OLDER ADULTS

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Frailty status is a well-known predictor of adverse health outcomes and functional performance. An assessment tool based on a wearable sensor was developed to quickly assess frailty using an upper extremity flexion and extension test. However, the current tool has relied on conventional frailty assessment to classify the frailty status of the participant. The aim of this study is to operationalize the frailty index based on wearable sensor to classify frailty status of older adults. 104 older adults were recruited for the study (age=78.6 ±9.7 years old). Participants were asked to perform a quick 20-second upper flexion and extension task while wearing a gyroscope on the wrist. A sensor-based frailty index (FI) was derived using parameters extracted from the sensor. Participants were also assessed using the Fried Phenotype Criteria (FC) and were classified into three groups: robust, pre-frail, and frail. Mean-shift clustering algorithm was used to operationalize the FI by identifying the cut-off point for each group. Grip strength and physical activity level were used as functional outcome measures. Regression analysis (r) was used to compare the correlation of the FC and FI with the identified metrics. Bivariate analysis show that grip strength was highly associated with the sensor-based frailty classification (r=-0.547) and FC (r=-0.503). The sensor-based classification was significantly associated with walking activity (r=-0.355). The results showed that the sensor-based frailty assessment tool could be used to quickly classify frailty status in older adults and eliminated the need for subjective and time-consuming evaluation.

VALIDITY OF COMMUNITY-BASED FRAILITY CHECK-UP BY SENIOR VOLUNTEERS FOR PREDICTING ADVERSE HEALTH OUTCOMES

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