

comorbidities, polypharmacy was present in 61.5% of people with diabetes, compared with 36.0% in people without diabetes. Significant risk factors for polypharmacy were diabetes (Relative-risk ratios/RRR=4.06, 95% CI 3.38, 4.86), older age (RRR=1.02, 95% CI 1.01, 1.03), male (RRR=0.64, 95% CI 0.55, 0.75), more comorbidity (RRR=2.46, 95% CI 2.30, 2.62), living with a partner (RRR=1.20, 95% CI 1.01, 1.42), and less wealth (RRR=0.93, 95% CI 0.87, 0.98). However, age, cohabitation, and wealth were not significantly related to excessive polypharmacy. Diabetes and the number of comorbidities were predominant risk factors for excessive polypharmacy. Current evidences confirmed both health condition and socioeconomic status were associated with medication use in older adults.

LONGITUDINAL RELATIONSHIP BETWEEN ENERGY UTILIZATION AND PHYSICAL AND COGNITIVE PERFORMANCE AS A FUNCTION OF AGE

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Energy utilization, which becomes more inefficient with age and is measured by a ratio of energy-cost-to-energy-capacity ("cost-ratio"), has been associated with functional decline. However, the interplay between longitudinal changes in energy efficiency and physical/cognitive functioning remains unclear. We investigated this relationship in 1020 participants of the Baltimore Longitudinal Study of Aging (baseline age: 68.9 (IQR: 59.8, 80.5), male: 44.7%). In linear mixed effects models adjusted for baseline age, sex, and height, an increasing cost-ratio was associated with faster decline in usual gait speed among those aged 50-64 years (beta = -0.20 m/s, p = 0.003), and ≥ 65 years (beta = -0.16 m/s, p less than 0.001), but not those less than 50 years (beta = -0.22 m/s, p = 0.178). In models adjusted for baseline age, sex, race, and years of education, higher cost-ratio was associated with faster declines in executive function, as measured by time to finish Trail B, among those aged ≥ 65 years (beta = 22.96 seconds, p = 0.020), but not < 50 years (beta = -13.65 seconds, p = 0.557) or 50-64 years (beta = -15.61 seconds, p = 0.353). Together, these results suggest that energy utilization becomes more inefficient in the two to three decades prior to change in physical and cognitive functioning, implying it may act as an early marker of physiological aging. Further research is needed to understand the drivers of energy inefficiency, which may shed light on the biological mechanisms contributing to these declines.

SENSITIVITY OF SELF-REPORTED COMORBIDITIES COMPARED TO MEDICARE CLAIMS IN OLDER ADULTS WITH TRAUMATIC BRAIN INJURY

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Patient reported history of comorbid illness may be the only information available to the treatment team during an acute injury admission. Nevertheless, acute injury, particularly traumatic brain injury (TBI) which affects cognition, may decrease the patient's ability to accurately report medical history. Thus, the objective of this study was to evaluate the accuracy of patient-reported comorbid illness burden compared to the patient's Medicare administrative claims. Records of older adults treated for TBI at an urban level 1 trauma center 2006-2010 were linked to their Medicare administrative. Comorbidities were recorded in Medicare claims based on ICD9 codes and were reported in the trauma registry (TR) based on patient medical history recorded by a physician or nurse. Prevalence of each of the following comorbidities was calculated using information from the TR and claims: Alzheimer's disease and related dementias, chronic kidney disease, COPD, heart failure, diabetes, depression, stroke, and hypertension. Sensitivity of each patient-reported comorbidity was calculated using Medicare claims as the gold standard. We identified patient factors associated with accurate self-report using logistic regression. Among 408 older adults with TBI that linked to their Medicare claims, prevalence of each comorbidity was higher in Medicare claims compared to the TR, except for hypertension. Sensitivity for detecting these comorbidities using the TR ranged from 2% to 68%, with the highest sensitivity observed for hypertension. Older age and race were predictors of less accurate reported medical history. Reconciling self-reported patient history of these comorbidities with those reported in claims can better inform decisions regarding treatment.

ASSOCIATION BETWEEN GRIP STRENGTH AND COGNITIVE FUNCTION AMONG COMMUNITY-DWELLING OLDER ADULTS

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Background: Decline in both physical function and cognition among older adults has been associated with increased risk of dementia. Physical activity (PA) is beneficial for the improvement of both physical and cognitive function. The purpose of the study was to investigate the association between baseline physical function and cognitive function after 12 weeks of resistance training among older adults. Methods: Two hundred and thirty-seven community-dwelling older adults (N=237, 73.7 \pm 5.7 years, 58.2% female) participated in a 12-week resistance exercise program (3 times/week; 3 sets, 6-8 repetitions at 75-80% of the 1-repetition maximum), designed to increase strength and muscle mass of major muscle groups. Body composition, physical activity status, grip strength, cardiovascular risk factors, 6 minutes walking distance (6MWD), and Mini-Mental State Examination (MMSE) were measured at baseline and endpoint. The linear regression model was used to examine the association. Results: