

One-hundred and eleven older adults (age:  $69 \pm 7$  years) with type 2 diabetes participated in this cross-sectional observational study. The participants sociodemographics, physical function, cognitive status (Mini Mental State Exam – MEEM and Geriatric Depression Scale – GDS), balance (Mini BEST test), functional performance (WHODAS 2.0) and falls risk (Quick Screen Clinical Falls Risk Assessment – QuickScreen) were evaluated. The data was analyzed using the Kruskal-Wallis, Chi-square, and Fisher's exact tests ( $p < 0.05$ ). Thirty percent of the participants had fallen during the previous 12 months, and 80% of the participants reported fear of falling. The average number of falls risks was  $3.5 \pm 2$ . Increased number of falls risks were associated with lower educational level ( $p = 0.005$ ), poorer general health ( $p = 0.001$ ), vision impairment ( $p = 0.017$ ), higher number of diseases ( $p < 0.0001$ ), higher number of medications ( $p < 0.0001$ ), longer diabetes duration ( $p < 0.0001$ ), lower limb pain ( $p < 0.0001$ ), depression ( $p < 0.001$ ), worse functional performance ( $p < 0.0001$ ), and worse balance ( $p < 0.0001$ ). Older adults with type 2 diabetes with lower education, worse health and vision, greater number of diseases and medications, longer diagnosis of diabetes, lower limb pain, depressive symptoms, worse functional performance and balance presented more risks for falls.

#### SERUM 25-HYDROXYVITAMIN D LEVELS IMPACT RISK OF EXTENSIVE ASSISTANCE NEEDED BY OLDER ADULTS TO WALK

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Study objective is to determine the association between deficient 25-hydroxyvitamin D [25(OH)D] serum levels and the amount of assistance needed to walk in a room by older adults living in long-term care (LTC) communities. Participants (age  $\geq 65$ ) from five LTC communities in Central Texas were recruited for a multi-site, cross-sectional study ( $n = 169$ ). Double-blinded data abstraction protocols were used to collect a one-year medical history. Laboratory blood draws measured serum 25(OH)D levels. Level of assistance was measured by the activities of daily living score for walking in room from section G of the Minimum Data Set (MDS). To determine the association between deficient 25(OH)D serum levels ( $\leq 20$  ng/ml) and assistance with walking, adjusted logistic regression was used. Total vitamin D per day (supplementation and meals), therapy and/or restorative programs, body mass index, race, gender, age, and years living in the community were used as confounders. Of the 169 participants (mean age=83) 27.17% had deficient serum 25(OH)D and 9.25% required extensive assistance to walk in a room. The mean serum level and supplementation rate of participants was 32.61 ng/ml and 1,160.64 IU per/d, respectively. Participants with deficient 25(OH)D serum levels had significantly elevated odds (OR=8.73; CL: 1.28, 8.54;  $p = 0.027$ ) of requiring extensive assistance to walk in a room compared to those with adequate serum levels ( $> 20$  ng/ml). Deficient 25(OH)D serum levels are associated with increased assistance to walk in a room indicating

that adequate serum levels in LTC residents could potentially decrease burden on staff.

#### ONE-LEGGED STANCE BALANCE OF OLDER ADULTS WITH AND WITHOUT FALLS

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Balance impairment is a common problem among older adults. Poor balance in older adults is often associated with mobility impairments, activity limitations and fear of falling in older adults. Thus, balance assessment is useful for early detection of postural control deficits to prevent mobility impairments and falls in older adults. The aim of this study was to assess if balance measures based in center of pressure (COP) parameters during one-legged stance could differentiate between older adults with and without falls in the past 12 months. One-hundred and seventy older adults (50 fallers and 120 non-fallers, age range: 63-72 years) performed three 30s one-legged stance trials with eyes open on a force platform with 30s of rest between each trial. The following variables were evaluated: COP 95% elliptical area, COP velocity in the anterior-posterior and medio-lateral directions, and test duration (how long the participant was able to stay in one-legged stance, up to 30s). Fallers had poorer balance than non-fallers ( $P \leq 0.004$ ). The COP parameters presented an area under the curve between 0.65-0.72, with sensitivity varying from 66 to 78% and specificity from 54 to 68%. There were no significant differences between fallers and non-fallers on test duration (17 vs. 18s, respectively). The findings showed that the fallers had similar duration time, but poorer balance than the non-fallers during one-legged stance. The COP parameters were able to differentiate the balance between fallers and non-fallers with acceptable area under curve, sensitivity and specificity.

#### CHARACTERISTICS OF MALADAPTIVE FALL RISK APPRAISAL AMONG OLDER ADULTS AGES 60 YEARS AND OLDER

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Even though one-third of older adults have maladaptive fall risk appraisal (FRA), no studies has examined this discrepancy between perceived fall risk and physical fall risk among older adults in Thailand. We examined the characteristics of fall risk appraisal (FRA). 433 community-dwelling older adults were randomly selected from two provinces in