

factors, removing factors with the highest p-value one by one until all remaining factors were statistically significant.

Results: Analyses included 188 participants (66% women, mean age 85.7 years, range 65–105, mean MMSE 21 range 0–30, 31% needed consultant consent, 20% dehydrated). In univariate analyses a wide range of factors predicted dehydration. In the multivariate model, adjusting for age and all other factors at once, moderate or severe dementia, using diabetic medication, swollen feet, poor renal function, higher numbers of prescription medications and health professional contacts, and lower standing blood pressure were all associated with greater odds of dehydration (Table).

Conclusions: A range of diverse factors are moderate predictors of dehydration in care home residents, including markers of cognitive and physical frailty. We need to find ways of identifying individuals becoming dehydrated.

Table: Factors predicting dehydration in older people living in residential care in multivariate forward stepwise logistic regression, adjusting for age and each included factor

Factor	OR	95% CI
Dementia assessment by staff – Moderate or severe dementia vs. none or minor dementia	5.77	1.98–16.80
Being unable to correctly copy 2 intersecting pentagons, or not attempting it vs. achieving it	4.14	1.62–10.55
Standing diastolic BP 3 minutes after standing up, 40 to 73 mmHg vs. >73 mmHg or no measurement	2.71	1.07–6.89
Number of health-professional contacts over past 2 months, rise in risk per additional contact	1.06	1.02–1.11
Feet too swollen to allow foot assessment vs. assessment possible	4.72	1.65–13.49
Number of prescription medications, rise in risk per additional prescription	1.11	1.01–1.23
Uses any diabetic medication (injection or tablet) vs. no diabetic medication used	8.81	2.30–33.65
Estimated glomerular filtration rate (eGFR), reduction in risk with each additional 1 ml/min/1.73 m ²	0.97	0.95–1.00

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Different nations, so different cut-off points: a reference population to define muscle mass and function cut-off points from Turkey

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Aim: We aimed to report on reference-values for “hand-grip-strength” and “muscle-mass” parameters in accordance with European-Working-Group-on-Sarcopenia-in-Older-People (EWG-SOP) sarcopenia definition in Turkish population. As a secondary outcome, we aimed to report the normal values of usual-gait-speed, calf-circumference and middle-arm-circumference in the healthy adult Turkish population.

Methods: Turkish subjects between 18–39 years of age with no known disease and chronic drug usage were asked to participate in our study. Body composition was assessed with body-impedance-analysis via BC 532 model body analysis monitor. Skeletal-muscle-index was calculated as the BIA predicted absolute skeletal muscle mass/height². Grip strength was assessed with the JAMAR-hydraulic-hand-dynamometer. The cut-off thresholds of the studied parameters were defined as the mean-2SD of the values of the reference study population.

Results: A total of 282 participants (175 male, 107 female) were included in our study. Mean ages were 27±4.5, 26±4.8 years; usual-gait-speeds were 1.4±0.2 m/s, 1.4±0.2 m/s; hand-grip-strengths were 53.5±7.5 kg, 33.0±5.3 kg; skeletal-muscle-indexes were 11±0.9, 9±0.8 kg/m²; calf-circumferences were 37.4±3.0 cm, 34.6±2.7 cm, middle-arm-circumferences were 29.2±2.8 cm, 24.2±2.2 cm, in males and females, respectively. The cut-off thresholds for hand-grip-strengths were 38.5 kg and 22.5 kg; skeletal-muscle-index were 9.2 kg/m² and 7.4 kg/m², in male and female subjects, respectively.

Conclusions: Our study suggests that the cut-off thresholds for hand-grip-strength and skeletal-muscle-index are highest in the

Turkish population. By highlighting the significant differences in between the populations, this study underscores the call of EWG-SOP's urgent need to obtain good reference values for populations around the world.

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Impact of malnutrition on physical, cognitive function and mortality among older men living in veteran homes

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Objectives: To evaluate the prevalence of malnutrition and its impact on mortality, functional decline and cognitive impairment among elder residents in long-term care settings.

Design: A prospective cohort study.

Setting: Two veteran homes in Taiwan.

Participants: A total of 1,248 residents in veteran homes.

Intervention: None.

Measurements: Charlson's comorbidity index (CCI), Minimum data set (MDS), resident assessment protocols (RAP), ADL Hierarchy scale, Cognitive Performance Scale, MDS Social engagement scale.

Results: A total of 1,248 participants (83.1±5.1 years, all male) completed this study, and the prevalence of malnutrition was 6.1%. Inadequate dietary content (57.9%) and unintentional weight loss (31.6%) account for the majority of malnutrition. Higher 18-month mortality rate (25% vs. 14.2%), higher CCI (median 1 vs. 0), and higher sum of RAP triggers (median 8.5 vs. 5) was noted among residents with malnutrition. Malnutrition was predictive for functional decline (OR: 3.096, 95% CI: 1.715–5.587) and potential cognitive improvement (OR: 2.469, 95% CI: 1.188–5.128) among survivors after adjustment for age, body mass index and CCI.

Conclusion: Malnutrition was associated with multimorbidities and higher care complexity, which was predictive for mortality and functional decline. However, among survivors at the end of study, baseline malnutrition was associated with better cognitive improvement.

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Calcium intake in the Mediterranean region

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A deficiency in calcium intake, is considered an important risk factor for the development of osteoporosis. Since the human body cannot produce calcium, individuals are recommended to maintain an adequate daily intake.

The aim of the “Calcium Intake in the Mediterranean Region” Study is to evaluate the mean calcium intake in men and women between 40 and 80 residing in various areas of the Mediterranean basin. Enrolled subjects have been asked to fill out a self-administered questionnaire to evaluate the mean daily calcium intake from food, principle risk factors for osteoporosis were registered. A dual-energy X-ray absorptiometry (DEXA) has also been carried out to evaluate bone mineral density (BMD).

During the recruitment period between March 2011 and February 2014, were enrolled 982 subjects. 90% are female, the average age is 60.4±10.0 years.

The mean daily calcium intake is 1005 ± 449.9 mg. Over the 63% of the sample assume a lower calcium intake compared to the recommended dietary allowance (RDA), there are statistically significant gender differences ($p < 0.0001$) because men have a greater calcium assumption. There is also a significant decreasing trend of assumption with age ($p < 0.0001$). Calcium Intake is lower in osteopenic and osteoporotic subjects compared to subjects with normal BMD ($p = 0.0048$). Factors significantly associated with a low calcium intake are: sex, age, body mass index, previous fracture, family fracture history.

Our study remarks the importance of calcium for the bone health and at the same time, confirms that Mediterranean women over 60 years of age need more calcium daily intake.

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Better bones by drinking coffee in elderly women?

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Introduction: Coffee consumption is increasing in Asia. Although Asian is known to have lower bone mass than Caucasians, little is known about coffee consumption and bone health. This study aimed to assess the relationship between coffee consumption and bone health in Korean elderly women, considering the potential effect modification by hormone.

Methods: Participants were 2,602 elderly women (mean age 69.3 years) from the fourth and fifth Korean National Health and Nutrition Examination Survey (2008–2011), which is a cross-sectional survey of a nationally representative sample of the Korean population. Coffee intake was assessed using 24-hour diet recall. Bone mineral densities (BMDs) were measured using dual energy X-ray absorptiometry. Weighted multiple logistic models were used to estimate the associations between coffee intake and bone health, adjusted for age, body mass index (BMI), behavioral factors, socioeconomic status, and hormonal factors.

Results: After adjusting for various demographic and lifestyle confounders including age and BMI, subjects in the highest quartile of coffee intake had 44% lower odds for osteoporosis compared to those in the lowest quartile (adjusted odds ratio [aOR] = 0.56; 95% confidence interval [CI]: 0.39–0.80; P for trend: 0.002). This trend was consistent after stepwise adjustment socioeconomic status and hormonal factors (P for trend: 0.001, 0.026, respectively).

Conclusion: Coffee consumption may have protective effects on bone health in Korean elderly women. Further prospective studies are required to confirm this association.

Organ- and system-linked dysfunction

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The effect of phosphate enemas on serum calcium and phosphate in an elderly inpatient population with renal impairment

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Introduction: The use of sodium phosphate enemas has been reported to cause electrolyte derangements in patients with renal impairment, even causing death. We aim to investigate if sodium phosphate enemas cause hyperphosphatemia and hypocalcemia in elderly inpatients with renal impairment.

Methods: We recruited 100 elderly inpatients with preexisting renal impairment and monitored serum calcium and phosphate concentrations pre-fleet and post-fleet.

Results: There was no statistically significant difference in the serum calcium and phosphate levels before and after fleet enemas

were administered. Among those who developed hypocalcemia after fleet enemas were administered, there were no statistically significant difference in terms of age, Abbreviated Mental Test (AMT), modified Barthel score, eGFR, pre-fleet serum calcium level, pre-fleet and post-fleet serum phosphate level as compared to those who were normocalcemic. In patients who developed hyperphosphatemia, they had lower eGFR values and higher pre-fleet phosphate levels as compared to patients who had normal phosphate levels post fleet enema.

Conclusion: Our trial concludes that in an elderly inpatient population with renal impairment, it is safe to use phosphate fleet enemas as it does not cause shifts in serum calcium or phosphate levels or increased mortality. However, in patients with lower eGFR values, hyperphosphatemia is observed and serum phosphate levels should be monitored after fleet enema is administered.

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A rare and atypical case of Churg Strauss in the elderly

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Introduction: Churg-Strauss syndrome is a rare systemic necrotizing small-vessel vasculitis, with accompanying bronchial asthma, eosinophilia, and eosinophilic infiltration of various tissues.

Method: We report an atypical case of patient who was diagnosed Churg-Strauss syndrome.

Result: A female patient, aged 83 years was admitted for an unexplained inflammatory syndrome and asthenia. She is followed for idiopathic pulmonary fibrosis for 1 year, hypertension and chronic renal failure unlabeled and not followed. The clinical examination found chronic cough accompanied by crackles bilateral bases. Laboratory tests found a significant inflammatory syndrome; chronic renal failure is stage 3. Normocytic normochromic anemia was found about 9 g/dl. Infectious balance remains negative. No endocarditis in echocardiography. CT scan found an aspect of diffusing fibrosing interstitial pneumonitis with a honeycomb appearance in the posterior basal subpleural regions. Temporal artery biopsy is negative and the patient does not complain of ocular signs, confirmed by the fundus. We require an autoimmune record that found autoimmune p ANCA (MPO) positive, associated with positive anti-nuclear antibody. Along with this, an assessment of renal impairment is made; kidneys remain below 9 cm, which makes the renal biopsy impossible. 24h proteinuria remains below 1g. ANCA vasculitis is suspected. The patient does not have asthma or atopy but followed for pulmonary idiopathic fibrosis. The bronchoalveolar lavage found eosinophilia, but no granulomas. Eosinophilia is found to 700/mm³. The Five Factors Score (FFS) is 1. Oral corticosteroid therapy achieved clinical and biological improvement.

Conclusion: This represented an atypical case of Churg Strauss syndrome, in the elderly.

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Sarcoidosis in an elderly patient presenting with post menopausal bleeding

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Sarcoidosis is a multisystem granulomatous disease of unknown aetiology that mainly affects the lungs. There are many forms and presentations of this disease and the lack of a single diagnostic test can make the diagnosis difficult. Isolated occurrence of sarcoidosis in the genital system is rare and poses a diagnostic challenge as it may imitate other conditions that commonly affect the female genital tract. In the majority of cases, it is diagnosed by biopsy. Non-necrotizing granulomas are the characteristic pathologic finding of sarcoidosis. New diagnoses of sarcoidosis in the elderly are