

nutritional recommendations are needed.

**P169- OSTEOPOROSIS, ACTIVE DAILY LIVING SKILLS, AND DIETARY PATTERNS OF CONGREGATE MEAL PARTICIPANTS.** Fatma G. Huffman<sup>1</sup>, Joan A. Vaccaro<sup>1</sup>, Gustavo G. Zarini<sup>1</sup>, Edgar R. Vieira<sup>2</sup> ((1) Department of Dietetics and Nutrition, Florida International University, Miami, FL, USA; (2) Department of Physical Therapy, Florida International University, Miami, FL, USA)

**Background:** Osteoporosis is a major public health concern for the aging population. Adequate nutrition is essential for the prevention and delayed debilitation of osteoporosis. Nutrition education and providing health screenings and exercise at congregate meal site could potentially prevent osteoporosis or delay its complications. **Objectives:** The purpose of this study was to assess differences in diet and physical function and their relationship to osteoporosis status among Congregate Meal participants. **Methods:** This study is a cross-sectional analysis of data from the 2015 Tenth Annual National Survey of Older American Act Participants (NSOAAP). The data are available to the public and the research protocol was approved by the Office of Management and Budget and all participants signed an Informed Consent Form. A two-staged stratified selection of 312 out of 628 Area Agencies on Aging (AAoA) was conducted and described in at <https://agid.acl.gov/DataFiles/>. The population included 901 adults ages 60 years and older who completed the 2015 NSOAAP Congregate Meals survey. The final sample size was N=888 with data available for osteoporosis diagnosis (absent/present). All analysis (frequencies, cross-tabulations and logistic regression) was performed with the Statistical Package for the Social Sciences (SPSS) version 24, with the module for complex sample analysis. **Results:** Attendees were 60 years and over, two-thirds female, and three-quarters non-Hispanic White. Approximately 60% were not currently married and 20% were diagnosed with osteoporosis. Only 31.9% with osteoporosis as compared to 51.1% without osteoporosis reported a good quality of life ( $p = .004$ ). Higher percent of persons with osteoporosis reported that their physical health limited moderate activities, stair climbing, and shopping. Regardless of osteoporosis status, attendees had inadequate macronutrient intake, consuming under the recommended servings of dairy, meat, grains, and fruits/vegetables. Males consumed more grain and desserts compared to females. Approximately 12% attended nutrition education, 36% exercise classes, and 37% had health screenings on site. **Conclusion:** Participants at congregate meals with and without osteoporosis are at risk for frailty complications due to inadequate nutrition. Strategies to increase nutrition education, health screening, and exercise programs and participation on the sites are justified.

**P170- A META-ANALYSIS OF THE EFFECT OF DIETARY OMEGA-3 FATTY ACID SUPPLEMENTATION ON WALKING SPEED AND INFLAMMATORY MARKERS IN OLDER HEALTHY ADULTS.** Joanne Stocks<sup>1,2,3</sup>, Ana M Valdes<sup>1,2,3</sup> ((1) NIHR Nottingham BRC, UK; (2) Arthritis Research UK Pain Centre, University of Nottingham, UK; (3) Division of Rheumatology, Orthopaedics and Dermatology, School of Medicine, University of Nottingham, UK)

**Background:** Frailty is a complex phenomenon, highly correlated with a reduction in mobility along with the progressive loss of skeletal muscle strength, mass and function. Dietary supplementation of omega-3 polyunsaturated fatty acids (PUFAs), eicosapentaenoic acid and docosahexaenoic acid have shown to have a beneficial effect on skeletal muscle mass and strength. PUFAs are of particular interest in the context of frailty, given their well-known anti-inflammatory

role and the consensus of an inflammatory contribution to frailty, with differences in the levels of pro-inflammatory cytokines between frail and non-frail elderly having been reported. **Objectives:** To examine the effect of dietary omega-3 PUFA supplementation on frailty traits and associated biomarkers in medically stable older adults. **Methods:** A meta-analysis of randomised controlled trials studying omega-3 PUFA supplementation in older, medically stable people, published up to October 2017 was carried out in 5 databases. The results were pooled using a random-effects meta-analysis with standardised mean differences. This study has been registered with PROSPERO (registration number CRD42017080240). **Results:** 13 studies met the inclusion/exclusion criteria but not all frailty traits or associated biomarkers were measured in all studies. In 4 studies that analysed 236 patients, omega-3 fatty acid supplementation was associated with a significant improvement in walking speed with a pooled effect size of 0.28 (95% CI, 0.00, 0.55;  $P = 0.05$ ). A significant lowering effect was observed for C-reactive protein (CRP) levels in 5 trials of 310 patients, with a pooled effect size of -0.62 (95% CI, -1.14, -0.10;  $P = 0.02$ ). The pooled effect sizes for the inflammatory cytokines TNF (5 trials;  $n=168$ ), was -0.36 (95% CI, -1.09, 0.36;  $P=0.33$ ), and for IL-6 (5 trials;  $n= 187$ ), was -0.08 (95% CI, -0.62, 0.47;  $P=0.78$ ) and were not found to be significant. **Conclusion:** These results suggest that dietary omega-3 supplementation may have a beneficial effect on medically stable older people by improving walking speed and reducing some markers of systemic chronic inflammation.

**P171- ASSOCIATION BETWEEN DIETARY NUTRIENT INTAKE AND SARCOPENIA: THE SARCOPHAGE COHORT STUDY.** Charlotte Beaudart<sup>1,2</sup>, Médéa Locquet<sup>1,2</sup>, Mathilde Touvier<sup>3</sup>, Jean-Yves Reginster<sup>1,2</sup>, Olivier Bruyère<sup>1,2</sup> ((1) Department of Public Health, Epidemiology and Health Economics, University of Liège, Liège, Belgium; (2) WHO Collaborating Centre for Public Health Aspects of Musculo-Skeletal Health and Aging; (3) Equipe de Recherche en Epidémiologie Nutritionnelle (EREN, UMR U1153 Inserm / U1125 Inra / Cnam / Universités Paris 5, 7 et 13, Centre de Recherche en Epidémiologie et Statistiques Sorbonne Paris Cité (CRESS))

**Background:** Aging could be associated with physiological anorexia, decreased caloric intake, malnutrition, and weight loss, which can lead to a decline in muscle mass and muscle function, characterised under the term sarcopenia. It has been suggested that a balanced nutrition intake may be useful in preventing or even reversing sarcopenia. **Objectives:** To describe associations between dietary nutrient intake and sarcopenia. **Methods:** Subjects were recruited from the SarcoPhAge study population, a Belgian cohort of community-dwelling subjects aged 65 years or older. Sarcopenia was diagnosed according to the criteria of the European Working Group on Sarcopenia in Older People. A Food Frequency Questionnaire (FFQ), developed in our Research Unit, using a 1-month recall period, was administered to the participants that were seen for a second-year follow-up. Two sets of meal pictures were displayed to estimate the portion of food daily consumed per participants. The Nutritional Belgian Recommendations of 2016 were used: i.e. adequate intake (AI) and estimated average requirement (EAR). For micronutrients, the prevalence of insufficient intake was estimated as the proportion of subjects whose intake was below the EAR. When possible, recommendations adapted to populations older than 60 years were used; otherwise, recommendations for adults (+18 years) were used. **Results:** 331 subjects (mean age of  $74.8 \pm 5.9$  years, 58.9% of women) had complete data and were included in this study. Among them, 51 were diagnosed sarcopenic (prevalence of 15.4%). FFQ analyses revealed that sarcopenic subjects had a