



## Selección de Resúmenes de Menopausia

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### **Dietary Protein Intake above the Current RDA and Bone Health: A Systematic Review and Meta-Analysis.**

Wallace TC, Frankenfeld CL.

Dietary intake of protein is fundamental for optimal acquisition and maintenance of bone across all life stages; however, it has been hypothesized that intakes above the current recommended dietary allowance (RDA) might be beneficial for bone health. We utilized the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines when preparing and reporting this systematic review and meta-analysis. A literature search strategy through April 11, 2017, was developed for the following 3 databases: PubMed, Ovid Medline, and Agricola. Included studies were those randomized controlled trials and prospective cohort studies among healthy adults ages 18 and older that examined the relationships between varying doses of protein intake at or above the current U.S. RDA (0.8 g/kg/d or 10%-15% of total caloric intake) from any source on fracture, bone mineral density (BMD)/bone mineral content (BMC), and/or markers of bone turnover. Twenty-nine articles were included for data extraction (16 randomized controlled trials [RCTs] and 13 prospective cohort studies). Meta-analysis of the prospective cohort studies showed high vs low protein intakes resulted in a statistically significant 16% decrease in hip fractures (standardized mean difference [SMD] = 0.84, 95% confidence interval [CI], 0.73, 0.95; I<sup>2</sup> = 36.8%). Data from studies included in these analyses collectively lean toward the hypothesis that protein intake above the current RDA is beneficial to BMD at several sites. This systematic review supports that protein intakes above the current RDA may have some beneficial role in preventing hip fractures and BMD loss. There were no differences between animal or plant proteins, although data in this area were scarce. Larger, long-term, and more well-controlled clinical trials measuring fracture outcomes and BMD are needed to adequately assess whether protein intake above the current RDA is beneficial as a preventative measure and/or intervention strategy for osteoporosis. Key teaching points: • • Bone health is a multifactorial musculoskeletal issue, and optimal protein intakes are key in developing and maintaining bone throughout the life span. • • Dietary protein at levels above the current RDA may be beneficial in preventing hip fractures and BMD loss. • • Plant vs animal proteins do not seem to differ in their ability to prevent bone loss; however, data in this area are scarce. • • Larger, long-term RCTs using women not using hormone replacement therapy (HRT) are needed to adequately assess the magnitude of impact that protein intakes above the RDA have on preventing bone loss.

**Gynecol Endocrinol. 2017 Jul 4:1-5. doi: 10.1080/09513590.2017.1344208. [Epub ahead of print]**

### **The metabolic syndrome is associated with carotid atherosclerosis and arterial stiffness in asymptomatic, nondiabetic postmenopausal women.**

Lambrinouadaki I, Kazani A, Armeni E, Rizos D, Augoulea A, Kaparos G, Alexandrou A, Georgiopoulos G, et al.

The menopause transition is associated with adverse changes in cardiometabolic risk factors. We aimed to examine the association of the metabolic syndrome (MS) and its features with indices of vascular structure and function in a population of asymptomatic postmenopausal women. A total of 473 informed-consenting, nondiabetic postmenopausal women were included in the study. The MS was defined according to the Joint Definition. We evaluated the association between the presence of MS and indices of vascular structure (carotid artery intima-media thickness (IMT); atherosclerotic plaques) and function (flow-mediated dilatation (FMD); pulse wave velocity (PWV)). The mean age of women was 56.4 ± 6.7 and the mean menopausal age was 7.91 ± 6.31. The MS was present in 17.3% of our population. Mean values of PWV increased linearly with the accumulation of features of the MS. IMT was higher in women with the MS compared to women without the MS (0.78 ± 0.12 mm vs. 0.74 ± 0.11, p = .003). Multivariate analysis showed that the presence of the MS was independently associated with common carotid artery IMT (b = 0.149, p = .001), PWV (b = 0.114, p = .012) as well as central systolic and diastolic blood pressure (b = 0.293, p < .001 and b = 0.163, p < .001 respectively). The presence of the MS is associated with subclinical atherosclerosis already in the first postmenopausal decade of this sample of asymptomatic, nondiabetic women. Additional evidence is required to support the causative effect of these associations.

**J Am Geriatr Soc. 2017 Jul 4. doi: 10.1111/jgs.14991. [Epub ahead of print]**

## **Associations Between Self-Reported Physical Activity and Physical Performance Measures Over Time in Postmenopausal Women: The Women's Health Initiative.**

Laddu DR, Wertheim BC, Garcia DO, Brunner R, Groessl E, Shadyab AH, Going SB, LaMonte MJ, et al.

**OBJECTIVES:** To examine prospective associations between changes in physical activity (PA) and changes in physical performance measures (PPMs) over 6 years in older women. **DESIGN:** Prospective cohort study. **SETTING:** Forty clinical centers in the United States. **PARTICIPANTS:** Women aged 65 and older (mean age 69.8) enrolled in the Women's Health Initiative Clinical Trials with gait speed, timed chair stand, grip strength, and self-reported recreational PA data assessed at baseline (1993-98) and follow-up Years 1, 3, and 6 (N = 5,092). **MEASUREMENTS:** Mixed-effects linear regression models were used to determine the association between time-varying PA and change in each PPM. Potential interactions between time-varying PA and age (<70, ≥70) were also tested. **RESULTS:** Significant, dose-response associations between PA and improvements in all PPMs were observed over the 6 years of follow-up after adjusting for important covariates. High PA groups (≥1,200 metabolic equivalent (MET)-min/wk) had stronger grip strength (0.48 kg greater; P < .01), more chair stands (0.35 more; P < .001), and faster gait speeds (0.06 m/s faster; P < .001) than sedentary women (<100 MET-min/wk). Higher PA levels were associated with a greater increase in chair stands over time in women aged 70 and older (P < .001) than in those younger than 70 (P interaction for age = .01). **CONCLUSION:** In postmenopausal women, maintaining high PA levels over time is associated with better lower extremity function. These data support the view that regular PA plays an important role in maintaining functional status during aging in older women.

**Ann Intern Med. 2017 Mar 7;132(5):345-353. doi: 10.7326/0003-4819-132-5-200003070-00003.**

## **Low Fractional Calcium Absorption Increases the Risk for Hip Fracture in Women with Low Calcium Intake.**

Ensrud KE, Duong T, Cauley JA, Heaney RP, Wolf RL, Harris E, Cummings SR; Study of Osteoporotic Fractures Research Group\*.

**Background:** Decreased ability to absorb calcium with age limits adaptation to low calcium intake and is thought to lead to secondary hyperparathyroidism and increased risk for hip and other fractures. However, the associations between fractional calcium absorption, dietary calcium intake, and risk for fracture have never been studied. **Objective:** To determine whether low fractional calcium absorption in women with low calcium intake increases the risk for subsequent hip and other nonspine fractures. **Design:** Prospective cohort study. **Setting:** Four clinical centers in Baltimore County, Maryland; Portland, Oregon; Minneapolis, Minnesota; and the Monongahela Valley, Pennsylvania.

**Participants:** 5452 nonblack women 69 years of age or older participating in the fourth examination of the Study of Osteoporotic Fractures. **Measurements:** Fractional calcium absorption was measured by using a 3-hour single isotope (<sup>45</sup>Ca) technique. Incident fractures were identified prospectively and were confirmed by radiographic report. **Results:** During an average of 4.8 years, 729 women (13%) experienced at least one nonspine fracture; 153 of these women had hip fractures. After adjustment for age, women with lower fractional calcium absorption were at increased risk for hip fracture (relative risk per 1-SD [7.7%] decrease in fractional calcium absorption, 1.24 [95% CI, 1.05 to 1.48]). Women with low fractional calcium absorption and low calcium intake were at greatest risk for subsequent hip fracture; among women whose dietary calcium intake was less than 400 mg/d, those who had fractional calcium absorption at or below the median value of 32.3% had a 2.5-fold (CI, 1.29-fold to 4.69-fold) increase in risk for hip fracture compared with those who had greater absorption efficiency. Fractional calcium absorption was not related to risk for other nonspine fractures (relative risk per 1-SD [7.7%] decrease in fractional calcium absorption, 1.05 [CI, 0.96 to 1.14]). **Conclusions:** In elderly women, low fractional calcium absorption in the setting of low calcium intake increases the risk for hip fracture. Our findings support the hypothesis of type II osteoporosis, which postulates that decreased calcium absorption is an important risk factor for hip fracture in older persons.

**Clin Interv Aging. 2017 Jun 13; 12:963-970. doi: 10.2147/CIA.S133712. eCollection 2017.**

## **The influence of the serotonergic system on the personality and quality of life of postmenopausal women.**

Schneider-Matyka D, Jurczak A, Szkup M, Samochowiec A, Grzywacz A, Wieder-Huszla S, Grochans E.

The aim of this study was to establish the relationship between personality traits of postmenopausal women and the presence of the 44-bp VNTR polymorphism in the serotonin transporter (5-HTT) (SLC6A4) promoter region and the 30-bp VNTR polymorphism in the MAO-A promoter region. The study's aim was also to determine the influence of personality traits on the quality of postmenopausal women's lives. The study involved 214 postmenopausal women from northwest Poland, with an average age of 56.8±4.08 years. It was performed using the Temperament and Character Inventory-Revised and the Short Form Health Survey. DNA polymorphisms were identified by means of polymerase chain reaction. Analysis demonstrated that the s/s genotype was significantly more common than the l/l genotype in women with higher fear of uncertainty. In a group with higher enlightened second nature and empathy, the l/s genotype was considerably more common than the l/l genotype. There were statistically significant associations between selected aspects of quality of life and personality traits such as enlightened second nature, transpersonal identification, purposefulness, and self-transcendence. The s/s genotype of the 44-bp VNTR polymorphism in the 5-HTT (SLC6A4) promoter region may increase the tendency to avoid harm within the fear of uncertainty dimension. Carriers of this genotype may have predisposition to anxiety and depressive disorders. The l/s genotype of the 44-bp VNTR polymorphism in the 5-HTT (SLC6A4) promoter region contributes to increased expression of enlightened second nature and empathy. Some personality traits may influence the quality of women's lives.

**PLoS One. 2017 Jun 29;12(6):e0180132. doi: 10.1371/journal.pone.0180132. eCollection 2017.**

## **Relationship between bone mineral density and alcohol intake: A nationwide health survey analysis of postmenopausal women.**

Jang HD, Hong JY, Han K, Lee JC, Shin BJ, Choi SW, Suh SW, Yang JH, Park SY, Bang C.

**OBJECTIVES:** Among a variety of relevant factors of osteoporosis, the association between alcohol intake and postmenopausal women's bone mineral density (BMD) by using data from the Korean National Health and Nutrition Examination Survey was evaluated in this study. **MATERIALS AND METHODS:** Among a total of 31,596 subjects, males, premenopausal women, participants without BMD data were excluded. Finally, a total number of subjects in the study was 3,312. The frequency and amount of alcohol intake were determined by self-reported questionnaires, and BMD was measured by dual-energy x-ray absorptiometry. **RESULTS:** Mean femoral BMD for light drinkers was statistically significantly greater than that for heavy drinkers and non-drinkers. We observed the characteristic trends for BMD by drinking frequency; the mean BMD gradually increased from non-drinkers to the participants who drank 2-3 times per week; these participants exhibited the highest BMD. Participants who drank alcohol greater than 4 times per week showed a lower BMD. In the risk factor analysis, the adjusted odds ratio for osteoporosis (at femoral neck) was 1.68 in non-drinkers and 1.70 in heavy drinkers compared with light drinkers. **CONCLUSIONS:** Light alcohol intake (2-3 times per week and 1-2 or 5-6 glasses per occasion) in South Korean postmenopausal women was related to high femoral BMD. Non-drinkers and heavy drinkers had approximately a 1.7-times greater risk for osteoporosis than light drinkers.