# Selección de Resúmenes de Menopausia

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## Body Mass Index, Waist Circumference, and Mortality in a Large Multiethnic Postmenopausal Cohort-Results from the Women's Health Initiative.

Chen Z, Klimentidis YC, Bea JW, Ernst KC, Hu C, Jackson R, Thomson CA.

OBJECTIVES: To determine whether the relationship between anthropometric measurements of obesity and mortality varies according to age, race, and ethnicity in older women. DESIGN: Prospective cohort study of multiethnic postmenopausal women. SETTING: Women's Health Initiative (WHI) observational study and clinical trials in 40 clinics. PARTICIPANTS: Postmenopausal women aged 50-79 participating in WHI (N = 161,808). MEASUREMENTS: Baseline height, weight, and waist circumference (WC) were measured, and body mass index (BMI) was calculated based on height and weight. Demographic, health, and lifestyle data from a baseline questionnaire were used as covariates. The outcome was adjudicated death (n = 18,320) during a mean follow-up of 11.4 ± 3.2 years. RESULTS: Hazard ratios (HRs) and 95% confidence intervals (95% CIs) indicated that ethnicity and age modified (P < .01) the relationship between obesity and mortality. Underweight was associated with higher mortality, but overweight or slight obesity was not a risk factor for mortality in most ethnic groups except for Hispanic women in the obesity I category (HR = 1.42, 95% CI = 1.04-1.95). BMI was not or was only weakly associated with mortality in individuals aged 70-79 (HR = 0.90, 95% CI = 0.85-0.95 for overweight; HR = 0.98, 95 CI = 0.92-1.06 for obese I; HR = 1.11, 95% CI = 1.00-1.23 for obese II; HR = 1.08, 95% CI = 0.92-1.26 for obese III). In contrast, higher central obesity measured using WC was consistently associated with higher mortality in all groups. CONCLUSION: Underweight is a significant risk factor for mortality in older women, and healthy BMI ranges may need to be specific for age, race, and ethnicity. The findings support a consistent relationship between central obesity and mortality.

**Prev Med Rep. 2017 Jan 2;5:295-300. doi: 10.1016/j.pmedr.2016.12.024. eCollection 2017.**

## Long-term effects of a ten-year osteoporosis intervention program in a Swedish population-A cross-sectional study.

Grahn Kronhed AC, Salminen H.

The aim of the study was to explore long-term effects seven years after the completion of a ten-year community-based osteoporosis intervention program in Vadstena, Sweden. The association between calcaneal bone mineral density and several life style factors, and the impact of risk factors for sustaining a fracture after the age of 50 were also studied. Previous participants in the intervention group, and matched subjects were invited to calcaneal bone mass measurement by a portable device including the dual X-ray and laser (DXL) technology by Calscan, and to complete a questionnaire in 2006. A total of 417 persons (63% of those invited) in the intervention (I) group, and 120 persons (47% of those invited) in the control (C) group participated. Mean age was 63 years (37-94 years). There was somewhat more knowledge of osteoporosis in the I-group (M = 18) than in the C-group (M = 17) ($p < 0.05$), and more use of shoe/cane spikes in elderly women in the I-group (67%) than in the C-group (40.5%). The fully adjusted model of logistic regression showed that participants with an osteoporotic DXL T-score (≤- 2.5) had a 3-fold increased risk (95%CI 1.48-6.89) of having a history of a self-reported fracture after the age of fifty compared to women with a calcaneal T-score >-2.5. The long-term effects of a ten-year, community-based, osteoporosis intervention program on knowledge and behavior were modest seven years after its completion.

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## Increasing Risk of Osteoporotic Fracture Is Associated with Vascular Dysfunction and Abnormal Vascular Structure in Both Men and Women.

Kajikawa M, Oda N, Kishimoto S, Maruhashi T, Iwamoto Y, Iwamoto A, Matsui S, Aibara Y, et al.

BACKGROUND: Osteoporosis and cardiovascular disease are major public health problems. A number of clinical studies have shown a link between osteoporosis and cardiovascular disease, but there is no information on the associations of risk of osteoporotic fracture with vascular function and vascular structure.Methods and Results:The risk of major osteoporotic fracture was calculated using the World Health Organization fracture risk assessment tool

(FRAX); vascular function was assessed using flow-mediated vasodilation (FMD) and nitroglycerine-induced vasodilation (NID), and vascular structure was assessed on brachial artery intima-media thickness (IMT) in 414 subjects (241 men and 173 women) who underwent health examinations. On univariate regression, FRAX was negatively correlated with FMD (total, r=-0.16, P<0.001; men, r=-0.19, P=0.003; women, r=-0.25, P<0.001) and NID (total, r=-0.22, P<0.001; men, r=-0.19, P=0.003; women, r=-0.30, P<0.001) and was positively correlated with brachial artery IMT (total, r=0.12, P=0.02; men, r=0.22, P<0.001; women, r=0.33, P<0.001). On multivariate analysis FRAX remained an independent predictor of FMD, NID, and brachial artery IMT in both men and women. CONCLUSIONS: Increase in the risk of osteoporotic fracture evaluated on FRAX is associated with vascular dysfunction and abnormal vascular structure in both men and women. Osteoporosis should be monitored in order to reduce the risk of cardiovascular events.

**Eur J Ophthalmol. 2001 Jul-Sep 2001;11(3):277-280. doi: 10.5301/EJO.2008.45.**

## Effect of hormone replacement therapy on ocular hemodynamics in postmenopausal women.

Atilla H, Arslanpene A, Batioglu F, Eryilmaz T, Ayta S, Ozcan H, Kurtay G.

PURPOSE: To evaluate the effect of hormone replacement therapy on ocular hemodynamics in postmenopausal women. METHODS: Ocular Doppler ultrasonography was performed in 20 postmenopausal women on hormone replacement therapy (HRT) and in 20 women without treatment, as the control group. Central retinal artery (CRA), posterior ciliary artery (PCA) and ophthalmic artery (OA) flow velocities and vascular resistances were measured prospectively by a radiologist blinded to the therapy. There were no associated systemic or ocular diseases or any medication history. RESULTS: The mean age of the patients on HRT was 50.05 4.5 yrs (range 44 - 62). The mean age of the control group was 52.8 4.09 yrs (range 46 - 65). The mean duration of HRT was 1.6 1.4 yrs (range 3 months - 5 years). There were no differences between the groups in terms of flow velocities, vascular resistivities or pulsatility indices of OA, CRA and PCA (p>0.05). CONCLUSIONS: HRT is essential in postmenopausal women for relief of vasomotor symptoms, cardioprotection and prevention of osteoporosis. Even though vaso-occlusive complications of hormone preparations have been reported, we did not observe any changes in ocular hemodynamics detectable with Doppler ultrasonography. (Eur J Ophthalmol 2001; 11: 277-80).

**Clinics (Sao Paulo). 2017 Jan 1;72(1):44-50. doi: 10.6061/clinics/2017(01)08.**

## Risk of Vertebral Fracture in Patients Diagnosed with a Depressive Disorder: A Nationwide Population-Based Cohort Study.

Lee SC, Hu LY, Huang MW, Shen CC, Huang WL, Lu T, Hsu CL, Pan CC.

OBJECTIVE: Previous studies have reported that depression may play a crucial role in the occurrence of vertebral fractures. However, a clear correlation between depressive disorders and osteoporotic fractures has not been established. We explored the association between depressive disorders and subsequent new-onset vertebral fractures. Additionally, we aimed to identify the potential risk factors for vertebral fracture in patients with a depressive disorder.
METHODS: We studied patients listed in the Taiwan National Health Insurance Research Database who were diagnosed with a depressive disorder by a psychiatrist. The comparison cohort consisted of age- and sex-matched patients without a depressive disorder. The incidence rate and hazard ratios of subsequent vertebral fracture were evaluated. We used Cox regression analysis to evaluate the risk of vertebral fracture among patients with a depressive disorder. RESULTS: The total number of patients with and without a depressive disorder was 44,812. The incidence risk ratio (IRR) between these 2 cohorts indicated that depressive disorder patients had a higher risk of developing a subsequent vertebral fracture (IRR=1.41, 95% confidence interval [CI]=1.26-1.57, p<0.001). In the multivariate analysis, the depressive disorder cohort showed a higher risk of vertebral fracture than the comparison cohort (adjusted hazard ratio=1.24, 95% CI=1.11-1.38, p<0.001). Being older than 50 years, having a lower monthly income, and having hypertension, diabetes mellitus, cerebrovascular disease, chronic obstructive pulmonary disease, autoimmune disease, or osteoporosis were considered predictive factors for vertebral fracture in patients with depressive disorders.
CONCLUSIONS: Depressive disorders may increase the risk of a subsequent new-onset vertebral fracture.

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## Relationship between major dietary patterns and sarcopenia among menopausal women.

Mohseni R, Aliakbar S, Abdollahi A, Yekaninejad MS, Maghbooli Z, Mirzaei K.

BACKGROUND AND AIM: Dietary habits have been associated with the prevalence of the sarcopenia and limited data are available in this field for menopausal women. This study focused on the relationship between dietary patterns and prevalence of the sarcopenia in menopausal women. METHODS: This cross-sectional study was done in 250 menopausal women 45 years old or older. Dietary data were collected using a food-frequency questionnaire and physical activity was assessed by International Physical Activity Questionnaire (IPAQ). Height, weight, skeletal muscle mass, hand grip, and gait speed were measured and sarcopenia was defined based on European Working Group on Sarcopenia in Older People (EWGSOP) guidelines. RESULTS: Using factor analysis, two major dietary patterns were found: a Western pattern (high in commercial beverage, sugar and dessert, snacks, solid fat, potato, high fat dairy, legume, organ meat, fast food, and sweets) and a Mediterranean pattern (high in olive, low-fat dairy, vegetable, fish, nut, and vegetable oil). After adjusting for confounding variables, for the highest vs the lowest tertiles, the Odds Ratio (OR) for sarcopenia was 1.06 [95% confidence interval (CI), 0.47-2.37] in the Western pattern and 0.40 [95% confidence interval (CI), 0.17-0.89] in the Mediterranean pattern. CONCLUSIONS: Our findings suggest that Mediterranean dietary pattern has a favorable role in the prevention of sarcopenia.

**Hormones (Athens). 2016 Oct;15(4):527-533. doi: 10.14310/horm.2002.1709.**

## Parathyroid hormone response to severe vitamin D deficiency is associated with femoral neck bone mineral density: an observational study of 405 women with hip-fracture.

Di Monaco M, Castiglioni C, Tappero R.

OBJECTIVE: Hip-fracture patients with vitamin D deficiency can have either secondary hyperparathyroidism or normal levels of parathyroid hormone (PTH). We hypothesized that bone mineral density (BMD) could be lower in patients with high PTH levels than in those with normal levels of PTH, irrespectively of the severity of vitamin D depletion. DESIGN: In this cross-sectional study, we examined 405 women who had serum 25-hydroxyvitamin D below 12ng/ml 20.0 ± 5.9 (mean ± SD) days after a hip-fracture. PTH was assessed by a chemiluminescent immunometric assay and BMD by dual-energy x-ray absorptiometry at the unfractured femoral neck. RESULTS: BMD was significantly lower in the 148 women with secondary hyperparathyroidism than in the 257 with normal PTH levels: the mean T-score (SD) was -2.88 (0.93) and -2.65 (0.83), respectively, in the two groups (mean difference 0.23; 95% CI 0.05 - 0.41; P = 0.010). The association between PTH status and BMD persisted after adjustment for age, body mass index, phosphate, albumin-adjusted total calcium, 25-hydroxyvitamin D, estimated glomerular filtration rate, and magnesium (P=0.01). The presence of secondary hyperparathyroidism was significantly associated with a femoral neck T-score lower than -2.5. The adjusted odds ratio was 1.81 (95% CI 1.11 - 2.95; P=0.017). CONCLUSIONS: Our results show that PTH levels in the presence of severe vitamin D deficiency were significantly associated with femoral BMD in women with hip-fracture. Prevention and treatment of vitamin D deficiency may be particularly relevant in women who develop secondary hyperparathyroidism.

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## Predicting the risk of osteopenia for women aged 40-55 years.

Chen JH, Chen YC, Tsai MK, Chiou JM, Lee WC, Tsao CK, Tsai KS, Chie WC.

BACKGROUND/PURPOSE: Osteoporosis has been linked to an increased fracture risk and subsequent mortality in the later life. Previous prediction models have focused on osteoporosis in postmenopausal women; however, a prediction tool for osteopenia is needed. Our objective was to establish a prediction model for osteopenia risk in women aged 40-55 years. METHODS: This was a cross-sectional study. A total of 1350 Taiwanese women aged 40-55 years were recruited from a health checkup center from 2009 to 2010. The main outcome measure was osteopenia (-1≥bone mineral density T-score > -2.5). RESULTS: The Osteoporosis Preclinical Assessment Tool (OPAT) developed in this study was based on variables with biological importance to osteopenia and variables that remained significant ($p<0.05$) in the multivariable analysis, which include age, menopausal status, weight, and alkaline phosphatase level. The OPAT has a total score that ranges from 0 to 7, and categorizes women into high-, moderate-, and low-risk groups. The predictive ability of the OPAT (area under the receiver operating characteristic curve=0.77) was significantly better than that of the Osteoporosis Self-assessment Tool for Asians (area under the receiver operating characteristic curve=0.69). The inclusion of serum total alkaline phosphatase level in the model, which is easy to obtain from routine

health checkups, significantly enhanced the sensitivity (McNemar test, p=0.004) for detecting osteopenia in women aged 40-55 years. CONCLUSION: Our findings provide an important tool for identifying women at risk of osteoporosis at the preclinical phase.