Selección de Resúmenes de Menopausia

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The association between depression and bone metabolism: a US nationally representative cross-sectional study

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This population-based study investigated the association between depression and bone mineral density (BMD), fractures, and osteoporosis in the US population. We found that participants with depression had lower BMD and were more likely to have fractures and osteoporosis. Background: Depression, fractures, and osteoporosis are common in middle-aged and elderly, but their associations remained unclear. Objective: To investigate the association between depression and bone mineral density (BMD), osteoporosis, and fracture in a middle-aged and elderly US population. Methods: A nationally representative cross-sectional study used the National Health and Nutrition Examination Survey (NHANES) datasets. Depression was assessed and stratified using the Patient Health Questionnaire (PHQ-9). The multiple logistic regression models and the logistic binary regression models were used to analyze the association between depression and BMD, fractures, and osteoporosis. Gender, age, race, educational level, poverty ratio, body mass index (BMI), smoke, alcohol use, physical activity, and diabetes were included as covariates. Subgroup analysis was also conducted on gender, age, race, and education level. Results: In total, 9766 participants were included after a series of exclusions, and 4179 (42.79%) had at least mild depressive symptoms. Compared to the participants without depression, those with depression had a lower total femur, femoral neck, and total spine BMD after adjusting multiple covariates. The multivariable-adjusted logistic binary regression models demonstrated that participants with depression more likely have hip fractures (OR = 1.518, 95% CI: 1.377-2.703, P = 0.000), spine fractures (OR = 1.311, 95% CI: 1.022-1.678, P = 0.030), and osteoporosis (OR = 1.621, 95% CI: 1.388-1.890, P = 0.000). Subgroup analysis revealed that depressed participants who were males, non-Hispanic White, ≤ 70 years, and not highly educated had a lower BMD and easily had osteoporosis. Conclusion: Depression was associated with lower BMD, particularly in the spine, males, Hispanic-White, and not highly educated populations. Moreover, people with depression were more likely to have fractures and osteoporosis.

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Genetic admixture and cardiovascular disease risk in postmenopausal Hispanic women

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Background: Hispanics are a heterogeneous population with differences in the prevalence of cardiovascular disease (CVD) and its related risk factors among ethnic sub-groups. This study evaluated the association of genetic admixture and CVD in self-identified Hispanic women from the Women's Health Initiative (WHI). Methods: Data came from the WHI Observational Study and the Clinical Trial Components conducted among postmenopausal women. The CVD outcomes included coronary heart disease (CHD) and stroke. The proportions of European (EUR), sub-Saharan African (AFR), and Amerindian (AMI) admixture were estimated using 92 ancestry-informative markers. Cox regression models were used to assess the relationship between genetic admixture and CVD adjusting for age, lifestyle risk factors, known risk factors, and neighborhood socioeconomic status. Results: Among 5195 participants EUR ancestry was associated with a lower CHD risk after adjusting for age (HR 0.41, p = 0.02), and in the fully adjusted model (HR 0.40, p = 0.03). AFR ancestry was associated with a higher CHD risk after adjusting for age (HR 2.91, p = 0.03), but it only showed a trend in in the fully adjusted model (HR 2.46, p = 0.10). AMI ancestry was not statistically significantly associated with CHD and none of the genetic admixture proportions were statistically significantly associated with stroke (p > 0.05). Conclusion: EUR ancestry was associated with a lower risk of CHD in Hispanic women. This highlights the need to account for genetic admixture in future CVD studies to consider different heritage groups to understand the role that genetic, neighborhood socioeconomic status, and environmental factors contribute to CVD health disparities in Hispanic women.

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Mechanisms of Systemic Osteoporosis in Rheumatoid Arthritis

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Rheumatoid arthritis (RA), an autoimmune disease, is characterized by the presence of symmetric polyarthritis predominantly of the small joints that leads to severe cartilage and bone destruction. Based on animal and human data, the pathophysiology of osteoporosis, a frequent comorbidity in conjunction with RA, was delineated. Autoimmune inflammatory processes, which lead to a systemic upregulation of inflammatory and osteoclastogenic cytokines, the production of autoantibodies, and Th cell senescence with a presumed disability to control the systemic immune system's and osteoclastogenic status, may play important roles in the pathophysiology of osteoporosis in RA. Consequently, osteoclast activity increases, osteoblast function decreases and bone metabolic and mechanical properties deteriorate. Although a number of disease-modifying drugs to treat joint inflammation are available, data on the ability of these drugs to prevent fragility fractures are limited. Thus, specific treatment of osteoporosis should be considered in patients with RA and an associated increased risk of fragility fractures.

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Sugar- and artificially-sweetened soda consumption and subclinical atherosclerosis among Mexican women

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Background and aims: Sugar-sweetened soda consumption is associated with most cardiometabolic risk factors. The role of artificially-sweetened beverages in cardiovascular disease (CVD) is inconclusive, but their consumption correlates with health impairment. Little is known about the contribution of soda consumption in subclinical stages of atherosclerosis. Therefore, we evaluated the relation between sugar- and artificially-sweetened soda consumption and carotid intima-media thickness (IMT) among Mexican women. Methods and results: We cross-sectionally evaluated 1093 women enrolled in the Mexican Teachers' Cohort who were free of CVD, diabetes or cancer. Sugar- and artificially-sweetened soda consumption was estimated from a validated 140-item food frequency questionnaire in 2008 and all women underwent a carotid ultrasound assessment three years later. Participants were categorized into tertiles of soda consumption in servings/week. Subclinical atherosclerosis was defined as a mean left and/or right IMT ≥0.8 mm or the presence of plaque on either common carotid artery. In multivariable regression models, women in the highest tertile of sugar-sweetened soda consumption had 2.6% (95%CI: 0.8, 4.5) mean increased IMT, and had 2-fold the risk of carotid atherosclerosis (PR: 2.0, 95%CI: 1.3, 3.2) compared to those in the lowest tertile. In stratified analyses, older and postmenopausal women who consumed sugar-sweetened soda had an increased IMT and atherosclerosis risk. Artificially-sweetened soda consumption was not associated with IMT or carotid atherosclerosis. Conclusions: Sugar-sweetened soda consumption was associated with subclinical atherosclerosis among disease-free Mexican women. Public health strategies to decrease CVD should consider the impact of sugar-sweetened soda consumption, particularly in older women.

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Age at menopause is negatively associated with frailty: A systematic review and meta-analysis

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Menopause and related changes may be associated with frailty and contribute to higher frailty risk. This systematic review of the literature on the association between menopause and frailty combines the findings from studies of community-dwelling women. PubMed was systematically searched in March 2021 with a time frame from 2000 to March 2021 without language restriction. Potentially eligible studies were those that provided cross-sectional or prospective observational data on associations between menopause and frailty in community-dwelling women. Reference lists of relevant articles and the included studies were reviewed for additional studies. The same effect sizes were combined using a meta-analysis using the generic inverse variance method. From 131 studies identified, cross-sectional data on age at menopause from 3 studies and longitudinal data on surgical menopause from 2 studies were used for meta-analysis. Each one-year increase in age at menopause was significantly associated with a 2 % decreased risk of prevalent frailty (pooled odds ratio = 0.98, 95%CI (confidence interval) = 0.96-0.99, p < 0.001). Surgical menopause did not predict incident frailty (pooled OR = 1.02, 95%CI = 0.82-1.28, p = 0.23). This systematic review and meta-analysis showed that later age at menopause was significantly associated with a lower risk of prevalent frailty.

In a clinical setting, age at menopause can be useful information to help clinicians to evaluate and stratify frailty risk in postmenopausal women. Hormonal changes after menopause may be related to the link between age at menopause and frailty and thus warrant further investigation.

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Supplemental Vitamin D and Incident Fractures in Midlife and Older Adults

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Background: Vitamin D supplements are widely recommended for bone health in the general population, but data on whether they prevent fractures have been inconsistent. Methods: In an ancillary study of the Vitamin D and Omega-3 Trial (VITAL), we tested whether supplemental vitamin D3 would result in a lower risk of fractures than placebo. VITAL was a two-by-two factorial, randomized, controlled trial that investigated whether supplemental vitamin D3 (2000 IU per day), n-3 fatty acids (1 g per day), or both would prevent cancer and cardiovascular disease in men 50 years of age or older and women 55 years of age or older in the United States. Participants were not recruited on the basis of vitamin D deficiency, low bone mass, or osteoporosis. Incident fractures were reported by participants on annual questionnaires and adjudicated by centralized medical-record review. The primary end points were incident total, nonvertebral, and hip fractures. Proportional-hazards models were used to estimate the treatment effect in intention-to-treat analyses. Results: Among 25,871 participants (50.6% women [13,085 of 25,871] and 20.2% Black [5106 of 25,304]), we confirmed 1991 incident fractures in 1551 participants over a median follow-up of 5.3 years. Supplemental vitamin D3, as compared with placebo, did not have a significant effect on total fractures (which occurred in 769 of 12,927 participants in the vitamin D group and in 782 of 12,944 participants in the placebo group; hazard ratio, 0.98; 95% confidence interval [CI], 0.89 to 1.08; P = 0.70), nonvertebral fractures (hazard ratio, 0.97; 95% CI, 0.87 to 1.07; P = 0.50), or hip fractures (hazard ratio, 1.01; 95% CI, 0.70 to 1.47; P = 0.96). There was no modification of the treatment effect according to baseline characteristics, including age, sex, race or ethnic group, body-mass index, or serum 25-hydroxyvitamin D levels. There were no substantial between-group differences in adverse events as assessed in the parent trial. Conclusions: Vitamin D3 supplementation did not result in a significantly lower risk of fractures than placebo among generally healthy midlife and older adults who were not selected for vitamin D deficiency, low bone mass, or osteoporosis.

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Weight loss reduces circulating micro-RNA related to obesity and breast cancer in postmenopausal women

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Postmenopausal women with overweight or obesity have an increased risk of developing breast cancer but many of the mechanisms underlying this association remain to be elucidated. MicroRNAs (miRNAs), short non-coding single-stranded RNAs, regulate many physiological processes by controlling post-transcriptional regulation of mRNA. We measured circulating miRNA from 192 overweight/obese postmenopausal women (50-75 years) who were part of a randomized controlled trial, comparing independent and combined effects of a 12-month reduced-calorie weight-loss diet and exercise programme, versus control. RNA was extracted from stored plasma samples, and 23 a priori selected miRNA targets related to aetiology of breast cancer or obesity were measured using NanoString nCounter miRNA Expression assays. Changes from baseline to 12-months between controls and women in the diet/exercise weight loss arms were analysed using generalized estimating equations modification of linear regression, adjusted for confounders. We next examined changes in levels of circulating miRNA by amount of weight loss (0-10% versus ≥10%). Participants randomized to weight-loss interventions had statistically significantly greater reductions in miR-122 (-7.25%), compared to controls (+ 33.5%, P = 0.009), and miR-122 levels were statistically significantly correlated with weight loss (rho = 0.24; P = 0.001) Increasing weight loss was associated with greater reductions in miR-122 vs. controls (-11.7% (≥10% weight loss); +2.0% (0-10% weight loss) +33.5% (controls); Ptrend = 0.006), though this was not significant after correction for multiple testing (P = 0.05/23) Our study supports the effect of weight loss on regulation of miRNA.