Selección de Resúmenes de Menopausia

Semana del 29 Mayo a 4 Junio de 2019

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Am J Epidemiol. 2019 May 30. pii: kwz134. doi: 10.1093/aje/kwz134. [Epub ahead of print]

A Cross-Sectional Analysis of Telomere Length and Sleep in the Women's Health Initiative.

Grieshober L1,2, Wactawski-Wende J1, Blair RH3, Mu L1, Liu J4, Nie J1, Carty CL4, Hale L5, et al.

Telomere length is a heritable marker of cellular age that is associated with morbidity and mortality. Poor sleep behaviors, which are also associated with adverse health events, may be related to leukocyte telomere length (LTL). We studied a sub-population of 3,145 postmenopausal women enrolled 1993-1998 to the Women's Health Initiative (1,796 European American (EA), 1,349 African American (AA)) with Southern-blot measured LTL and self-reported usual sleep duration and sleep disturbance. LTL-sleep associations were analyzed separately for duration and disturbance using weighted and confounder-adjusted linear regression models in the entire sample (AA+EA; race-adjusted) and in race strata, as LTL differs by ancestry. Each additional hour of sleep beyond 5 hours, approximately, was associated with a 27 base pair (95% confidence interval (CI): 6, 48) longer LTL in AA+EA after covariate adjustment. Seep duration-LTL associations were strongest among AA (adjusted $\beta = 37$, 95% CI: 4, 70); a similar non-significant association was observed for EA (adjusted $\beta = 20$, 95% CI: -7, 48). Sleep disturbance was not associated with LTL in our study. Our models did not show departure from linearity (quadratic sleep terms $P \geq 0.55$). Our results suggest that longer sleep duration is associated with longer LTL in postmenopausal women.

Menopause. 2019 May 15. doi: 10.1097/GME.0000000000001360. [Epub ahead of print]

Women's Health Initiative clinical trials: potential interactive effect of calcium and vitamin D supplementation with hormonal therapy on cardiovascular disease.

Jiang X1,2, Nudy M3, Aragaki AK4, Robbins JA5, Manson JE6, Stefanick ML7, O'Sullivan DM1, et al.

OBJECTIVE: Data in humans and nonhuman primates have suggested a possible synergistic effect of vitamin D and calcium (CaD) and estrogen on the cardiovascular disease (CVD) risk factors. Using randomized trial data we explored whether the effect of menopausal hormone therapy (HT) on CVD events is modified by CaD supplementation. METHODS: A prospective, randomized, double-blind, placebo-controlled trial was implemented among postmenopausal women in the Women's Health Initiative. A total of 27,347 women were randomized to the HT trials (0.625 mg/d of conjugated equine estrogens [CEE] alone for women without a uterus vs placebo; or 0.625 mg of CEE in addition to 2.5 mg of medroxyprogesterone acetate daily [CEE + MPA] for women with a uterus vs placebo). After 1 year, 16,089 women in the HT trial were randomized to the CaD trial and received either 1,000 mg of elemental calcium carbonate and 400 IU of vitamin D3 daily or placebo. The mean (SD) duration of follow-up after CaD randomization was 6.2 (1.3) years for the CEE trial and 4.6 (1.1) years for the CEE + MPA trial. CVD and venous thromboembolism events evaluated in this subgroup analysis included coronary heart disease, stroke, pulmonary embolism, all-cause mortality, plus select secondary endpoints (total myocardial infarction, coronary revascularization, deep venous thrombosis, cardiovascular death, and all CVD events). Time-to-event methods were used and models were fit with a Cox proportional hazards regression model. RESULTS: In the CEE trial, CaD significantly modified the effect of CEE on stroke (P interaction=0.04). In the CaD-placebo group, CEE's effect on stroke was harmful (hazard ratio [95% confidence interval]=2.19[1.34-3.58]); however, it was neutral in the CaD-supplement group (hazard ratio [95% confidence interval]=1.07[0.66-1.73]). We did not observe significant CEE-CaD interactions for coronary heart disease, total CVD events, or any of the remaining endpoints. In the CEE + MPA trial, there was no evidence that the effect of CEE + MPA on any of CVD endpoints was modified by CaD supplementation. CONCLUSIONS: CaD did not consistently modify the effect of CEE therapy or CEE + MPA therapy on CVD events. However, the increased risk of stroke due to CEE therapy appears to be mitigated by CaD supplementation. In contrast, CaD supplementation did not influence the risk of stroke due to CEE + MPA.

Biomed Res Int. 2019 Apr 18;2019:8171897. doi: 10.1155/2019/8171897. eCollection 2019.

The Effect of Exercise on the Prevention of Osteoporosis and Bone Angiogenesis.

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Physical activity or appropriate exercise prevents the development of osteoporosis. However, the exact mechanism remains unclear although it is well accepted that exercise or mechanical loading regulates the hormones, cytokines, signaling pathways, and noncoding RNAs in bone. Accumulating evidence has shown that bone is a highly vascularized tissue, and dysregulation of vasculature is associated with many bone diseases such as osteoporosis or osteoarthritis. In addition, exercise or mechanical loading regulates bone vascularization in bone microenvironment via the modulation of angiogenic mediators, which play a crucial role in maintaining skeletal health. This review discusses the effects of exercise and its underlying mechanisms for osteoporosis prevention, as well as an angiogenic and osteogenic coupling in response to exercise.

J Am Osteopath Assoc. 2019 Jun 1;119(6):357-363. doi: 10.7556/jaoa.2019.064.

Bone Mineral Density Among Men and Women Aged 35 to 50 Years.

Bass MA, Sharma A, Nahar VK, Chelf S, Zeller B, Pham L, Allison Ford M.

Context: Osteoporosis is characterized by low bone mineral density (BMD) and has been thought to only be a major health concern for postmenopausal women. However, osteoporosis and its risk factors have been greatly understudied in the middle-aged and male populations. Objective: To assess the likelihood of low BMD and its association with related risk factors in early-middle-aged (defined in this study as 35-50 years) men and women. Methods: Eligible men and women completed a questionnaire assessing calcium intake, hours per week of exercise, and other related risk factors associated with osteoporosis and osteopenia. The primary outcome variable, BMD, was attained using dual-energy x-ray absorptiometry scans taken at the femoral neck, trochanter, intertrochanteric crest, total femur, and lumbar spine. Results: Of the 173 participants in this study, 23 men (28%) and 24 women (26%) had osteopenia at the femoral neck. In men, there was a significant and negative correlation between exercise and femoral neck BMD (r=-0.296, P=.01). In women, correlation analyses showed significant positive correlations between exercise and BMD of the trochanter (r=0.329, P=.003), intertrochanteric crest (r=0.285, P=.01), total femur (r=0.30, P=.01), and lumbar spine (r=0.29, P=.01). Conclusions: Osteopenia was found in more than 25% of both male and female participants, which suggests that more osteoporosis screening and prevention programs need to be targeted to persons in the studied age group because osteopenia can lead to osteoporosis.

Climacteric. 2019 May 28:1-8. doi: 10.1080/13697137.2019.1611761. [Epub ahead of print]

Vitamin D supplementation improves the metabolic syndrome risk profile in postmenopausal women.

Ferreira PP1, Cangussu L1, Bueloni-Dias FN1, Orsatti CL1, Schmitt EB1, Nahas-Neto J1, Nahas EAP1.

Objective: This study aimed to evaluate the effect of isolated vitamin D (VD) supplementation on the metabolic syndrome (MetS) risk profile in postmenopausal women. Methods: In this double-blind, placebo-controlled trial, 160 postmenopausal women aged 50-65 years were randomized into two groups: VD group, supplementation with 1000 IU vitamin D3/day ($n = 80$); or placebo group ($n = 80$). The intervention time was 9 months, and the women were assessed at baseline and endpoint. Clinical and anthropometric data were collected. Biochemical parameters, including total cholesterol, high-density lipoprotein, low-density lipoprotein, triglycerides, glucose, and insulin, were measured. The plasma concentration of 25-hydroxyvitamin D (25(OH)D) was measured by high-performance liquid chromatography. Results: After 9 months, there was a significant increase in the 25(OH)D levels for VD group (+45.4%, $p < 0.001$), and a decrease (-18.5%, $p = 0.049$) in the placebo group. In the VD group, a significant reduction was observed in triglycerides (-12.2%, $p = 0.001$), insulin (-13.7%, $p = 0.008$), and the homeostasis model assessment of insulin resistance (-17.9%, $p = 0.007$). In the placebo group, there was an increase in glucose (+6.2%, $p = 0.009$). Analysis of the risk adjusted for age, time since menopause, and body mass index showed that women supplemented with VD had a lower risk of MetS (odds ratio [OR] 0.42; 95% confidence interval [CI] 0.21-0.83), hypertriglyceridemia (OR 0.43; 95% CI 0.22-0.85), and hyperglycemia (OR 0.23; 95% CI 0.10-0.52) compared to the placebo group ($p < 0.05$). Conclusions: In postmenopausal women with VD deficiency, isolated supplementation with 1000 IU vitamin D3 for 9 months was associated with a reduction in the MetS risk profile. Women undergoing VD supplementation had a lower risk of MetS, hypertriglyceridemia, and hyperglycemia.

Maturitas. 2019 Jul;125:70-80. doi: 10.1016/j.maturitas.2019.04.213. Epub 2019 Apr 17.

Female reproductive factors and the likelihood of reaching the age of 90 years. The Netherlands Cohort Study.

Brandts L, van Poppel FWA, van den Brandt PA.

OBJECTIVES: The aim of this study was to prospectively assess the relationship between several reproductive factors in women and the likelihood of reaching the age of 90 years (achieving longevity). STUDY DESIGN: For this study, data from the oldest birth cohort (1916-17) of the prospective Netherlands Cohort Study (NLCS) were used. These participants filled in a baseline questionnaire in 1986 (at age 68-70 years). Follow-up for vital status information until the age of 90 years (2006-07) was >99.9% complete. MAIN OUTCOME MEASURES: Multivariable-adjusted Cox regression analyses with a fixed follow-up time were based on 2,697 women with complete exposure and co-variable data to calculate risk ratios (RR) of reaching age 90. RESULTS: No associations were observed between the likelihood of reaching the age of 90 years, and age at menarche, age at menopause, parity, menstrual lifespan, and oral contraceptive use after adjustment for potential confounders. A later age at first childbirth pointed towards a higher chance of achieving longevity (age ≥30 vs. 20-24; RR, 1.17; 95% CI,0.98-1.39). Ever-use of hormone replacement therapy (HRT) was significantly associated with a higher chance of achieving longevity compared with never HRT-users, but only in women who had had an early menopause (<50 years) (RR,1.32; 95% CI, 1.07-1.61). CONCLUSION: Age at first childbirth, and ever-use of HRT in women with an early menopause (<50 years) were associated with the likelihood of reaching the age of 90 years.

J Clin Endocrinol Metab. 2019 May 24. pii: jc.2019-00271. doi: 10.1210/jc.2019-00271. [Epub ahead of print]

Further Nonvertebral Fracture Reduction Beyond 3 Years for up to 10 Years of Denosumab Treatment.

Ferrari S1, Butler PW2, Kendler DL3, Miller PD4, Roux C5, Wang AT2, Huang S2, Wagman RB2, Lewiecki EM6.

CONTEXT: Evidence for further nonvertebral fracture (NVF) reductions with long-term antiresorptive therapy in osteoporosis is lacking. OBJECTIVE: To evaluate NVF risk reduction in subjects who received up to 10 years of denosumab treatment. DESIGN: Phase 3, randomized, placebo-controlled, 3-year FREEDOM trial (NCT00089791) and its open-label 7-year Extension (NCT00523341). SETTING: 214 study centers worldwide; subjects from this analysis came from 172 centers. PATIENTS: Women aged 60-90 years with BMD T-score <-2.5 at the lumbar spine or total hip but ≥-4.0 at both sites. INTERVENTIONS: Randomized 1:1 to denosumab 60 mg SC Q6M (long-term group) or placebo (cross-over group) in FREEDOM; eligible subjects could enroll in Extension to receive denosumab 60 mg SC Q6M. MAIN OUTCOME MEASURES: Exposure-adjusted subject incidence (per 100 subject-years) of NVF during denosumab treatment years 1-3 and 4-7 (all subjects) and years 4-10 (long-term group only), and rate ratios for years 4-7 or 4-10 vs 1-3. RESULTS: Among 4074 subjects in this analysis (2343 long-term; 1731 cross-over), NVF rates (95% CI) in all subjects were 2.15 (1.90-2.43) during years 1-3 and 1.53 (1.34-1.75) during years 4-7 of denosumab treatment (rate ratio [95% CI]=0.72 [0.61-0.86]; P<0.001). NVF rates in the long-term denosumab subjects only were 1.98 (1.67-2.34) during years 1-3 and 1.44 (1.24-1.66) during years 4-10 (rate ratio=0.74 [0.60-0.93]; P=0.008). The combined osteonecrosis of the jaw and atypical femoral fracture rate was 0.06. CONCLUSIONS: Long-term denosumab treatment, beyond 3 and up to 10 years, was associated with further reductions in NVF rates vs the first 3 years.

Menopause. 2019 May 20. doi: 10.1097/GME.0000000000001362. [Epub ahead of print]

Age at natural menopause and physical functioning in postmenopausal women: the Canadian Longitudinal Study on Aging.

Velez MP, Alvarado BE1, Rosendaal N2, da Câmara SM3, Belanger E4, Richardson H1, Pirkle CM5.

OBJECTIVE: The aim of this study was to evaluate the association between categories of age at natural menopause (ANM) and gait speed (slowness) and grip strength (weakness), common measures of physical functioning in older women. METHODS: We analyzed data from the Canadian Longitudinal Study on Aging, which included participants from seven cities across Canada collected in 2012. The sample was restricted to women who reported to have entered menopause (N=9,920). Women who had a hysterectomy before menopause were excluded since the age at which this surgical procedure was performed was not available. ANM was categorized into five groups: less than 40 (premature), 40 to 44 (early), 45 to 49, 50 to 54, and more than 54. We conducted linear regressions to assess the association between ANM and gait speed (m/s) and grip strength (kg) adjusting for participant age, education,

body mass index, smoking, use of hormone therapy, height, and province of residence. RESULTS: Mean ANM was 49.8 (95% confidence interval [CI]: 49.7-50.0), with 3.8% of women having a premature menopause; the average gait speed was 0.98 m/s (standard deviation: 0.22), the average grip strength was 26.6 kg (standard deviation: 6.39). Compared to women with ANM of 50 to 54, women with premature menopause had 0.054 m/s (95% CI -0.083, -0.026) lower gait speed when adjusting for age and study site. In the fully adjusted model, the association was attenuated, 0.032 m/s (95% CI -0.060, -0.004). ANM was not associated with grip strength. CONCLUSION: Our study suggests that premature menopause (<40 years) may be associated with lower gait speed (slowness) among Canadian women. No association was observed between ANM and grip strength. Future studies should include a life course approach to evaluate whether social and biological pathways modify the association between age at menopause and physical function in populations from different context.