Selección de Resúmenes de Menopausia

Semana del 6 a 12 de Julio 2022

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Steroids. 2022 Jul 6;109087. doi: 10.1016/j.steroids.2022.109087. Online ahead of print.

Intramuscular sex steroid hormones are reduced after resistance training in postmenopausal women, but not affected by estrogen therapy

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Animal and human studies suggest that low concentrations of circulating sex steroid hormones play a critical role in the accelerated loss of muscle mass and strength after menopause. The skeletal muscle can produce sex steroid hormones locally, however, their presence and regulation remain mostly elusive. The purpose of this study was to examine sex steroid hormone concentrations in skeletal muscle biopsies from postmenopausal women before and after 12-weeks of resistance training with (n=15) or without (n=16) estrogen therapy, and after acute exercise. Furthermore, associations between circulating sex hormones, intramuscular sex steroid hormones and muscle parameters related to muscle strength, mass and quality were elucidated. Blood and muscle samples, body composition (DXA-scan), muscle size (MR), and muscle strength measures were determined before and after the intervention. An additional blood and muscle sample was collected after the last resistance exercise bout. The results demonstrated reduced intramuscular estradiol, testosterone and dehydroepiandrosterone (DHEA) concentrations after resistance training irrespective of estrogen therapy. Acute exercise had no effect on intramuscular sex hormone levels. Low circulating levels of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) associated with high muscle mass at baseline, and a decline in circulating FSH after the intervention associated with a greater gain in muscle cross-sectional area in response to the resistance training. In conclusion, intramuscular estradiol, testosterone and DHEA were reduced by resistance training and unaffected by changes in circulating estrogen levels induced by estrogen therapy. Serum FSH and LH were superior predictors of muscle mass compared to other circulating and intramuscular sex steroid hormones.

Psychoneuroendocrinology. 2022 Jul 2;143:105851. doi: 10.1016/j.psyneuen.2022.105851.

Baseline anxiety-sensitivity to estradiol fluctuations predicts anxiety symptom response to transdermal estradiol treatment in perimenopausal women - A randomized clinical trial

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Background: The menopausal transition (perimenopause) is associated with an increased risk of major depression, characterized by anxiety and anhedonia phenotypes. Greater estradiol (E2) variability predicts the development of perimenopausal depression, especially within the context of stressful life events (SLEs). While transdermal E2 (TE2) reduces perimenopausal depressive symptoms, the mechanisms underlying TE2 efficacy and predictors of TE2 treatment response remain unknown. This study aimed at determining relationships between E2 fluctuations, mood symptoms, and physiologic stress-reactivity (cortisol and interleukin-6) and whether differences in mood-sensitivity to E2 fluctuations predict mood responses to TE2 treatment. Methods: This randomized, double-blind, placebo-controlled trial investigated medically healthy women (46-60 years) in the early or late menopause transition. Baseline E2-sensitivity strength was calculated from eight weekly individual correlations between week-to-week E2 change and index week anxiety (State-Trait Anxiety Inventory) and anhedonia (Snaith-Hamilton Pleasure Scale). Women then received eight weeks of TE2 or transdermal placebo. Results: Analyses included 73 women (active TE2 n = 35). Greater baseline E2 fluctuations predicted greater anhedonia ($p = .002$), particularly in women with more SLEs. Greater E2 fluctuations also predicted higher cortisol ($p = .012$) and blunted interleukin-6 ($p = .02$) stress-responses. Controlling for baseline symptoms, TE2 was associated with lower post-treatment anxiety ($p < .001$) and anhedonia ($p < .001$) versus placebo. However, the efficacy of TE2 for anxiety ($p = .007$) and also for somatic complaints ($p = .05$) was strongest in women with greater baseline E2 sensitivity strength. Conclusions: TE2 treatment reduced perimenopausal anxiety and anhedonia. The ability of baseline mood-sensitivity to E2 fluctuations to predict greater TE2 efficacy has implications for individualized treatment of perimenopausal anxiety disorders.

Nutrients. 2022 Jun 29;14(13):2716. doi: 10.3390/nu14132716.

Vitamin d endocrine system and covid-19: treatment with calcifediol

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The COVID-19 pandemic is the greatest challenge facing modern medicine and public health systems. The viral evolution of SARS-CoV-2, with the emergence of new variants with in-creased infectious potential, is a cause for concern. In addition, vaccination coverage remains in-sufficient worldwide. Therefore, there is a need to develop new therapeutic options, and/or to optimize the repositioning of drugs approved for other indications for COVID-19. This may include the use of calcifediol, the prohormone of the vitamin D endocrine system (VDES) as it may have potential useful effects for the treatment of COVID-19. We review the aspects associating COVID-19 with VDES and the potential use of calcifediol in COVID-19. VDES/VDR stimulation may enhance innate antiviral effector mechanisms, facilitating the induction of antimicrobial peptides/autophagy, with a critical modulatory role in the subsequent host reactive hyperinflammatory phase during COVID-19: By decreasing the cytokine/chemokine storm, regulating the renin-angiotensin-bradykinin system (RAAS), modulating neutrophil activity and maintaining the integrity of the pulmonary epithelial barrier, stimulating epithelial repair, and directly and indirectly decreasing the increased coagulability and prothrombotic tendency associated with severe COVID-19 and its complications. Available evidence suggests that VDES/VDR stimulation, while maintaining optimal serum 25OHD status, in patients with SARS-CoV-2 infection may significantly reduce the risk of acute respiratory distress syndrome (ARDS) and severe COVID-19, with possible beneficial effects on the need for mechanical ventilation and/or intensive care unit (ICU) admission, as well as deaths in the course of the disease. The pharmacokinetic and functional characteristics of calcifediol give it superiority in rapidly optimizing 25OHD levels in COVID-19. A pilot study and several observational intervention studies using high doses of calcifediol (0.532 mg on day 1 and 0.266 mg on days 3, 7, 14, 21, and 28) dramatically decreased the need for ICU admission and the mortality rate. We, therefore, propose to use calcifediol at the doses described for the rapid correction of 25OHD deficiency in all patients in the early stages of COVID-19, in association, if necessary, with the new oral antiviral agents.

Cancers (Basel). 2022 Jun 23;14(13):3090. doi: 10.3390/cancers14133090.

Postoperative Hormone Replacement Therapy and Survival in Women with Ovarian Cancer

Eunjeong Ji 1, Kidong Kim 2, Banghyun Lee 3, Sung Ook Hwang 3, Hee Joong Lee 4, Kyungjin Lee 3, et al.

The effect of postoperative hormone replacement therapy (HRT) on survival in women with ovarian cancer remains unclear. This study aimed to investigate the impact of postoperative HRT on survival in women with ovarian cancer using the nationwide cohort study. Women aged ≤60 and diagnosed with ovarian cancer that received primary surgery were followed-up for 5.6 ± 2.9 years. Mean ages of women administered HRT (the HRT group; n = 263) or not administered HRT (the control group; n = 1521) were 41.5 ± 8.5 and 41.0 ± 11.4 years, respectively. After adjustment for covariables, OS was significantly greater in the HRT group (HR 0.618; 95% CI 0.414-0.922; p = 0.018). Kaplan-Meier curve analysis showed OS was significantly higher in the HRT group (85.3% vs. 76.6%; p = 0.016). The ratio of women with HRT to women without HRT increased significantly with time (restricted mean survival times for OS, p < 0.001). In addition, OS was significantly greater for those that received HRT for >5 years than for those that received HRT for ≤0.5 years (HR 0.234; 95% CI 0.059-0.936; p = 0.040). Postoperative HRT improved survival among women with ovarian cancer. The impact of HRT on survival increased with time and treatment duration.

Arch Osteoporos. 2022 Jul 8;17(1):91. doi: 10.1007/s11657-022-01128-3.

The association between coronary artery disease and osteoporosis: a population-based longitudinal study in Taiwan

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Purpose: This large population-based study is the first to analyze the association between coronary artery disease (CAD) and osteoporosis (OP) from the National Health Insurance Research Database (NHIRD) in Taiwan to determine if CAD is associated with OP. Methods: Data from NHIRD, a national, population-based, retrospective, matched cohort study of 23 million patients, were collected to recruit two matched cohorts: with (n = 192,367) and without (n = 192,367) CAD. The Cox model was used to compare the incidence rate ratio and crude hazard ratio (HR) between the two cohorts for osteoporotic fracture and OP. Results: The CAD cohort had a significantly increased risk for vertebral compression fracture, with an adjusted HR of 1.74 (95% CI, 1.60-1.89). The cumulative incidence of OP was also statistically higher in the cohort versus without CAD (11.6% vs. 5.6%; p ≤ 0.0001, log-rank) during the 10-year follow-up period. The

Cox model showed a 2.04-fold increase in the incidence of OP in the CAD cohort, with an adjusted HR of 2.04 (95% confidence interval [CI], 1.99-2.08). Conclusions: A positive association exists between CAD and development of subsequent osteoporotic fracture and OP. Patients with CAD have a significantly increased risk of developing vertebral compression fracture and a higher incident rate ratio of OP.

Maturitas. 2022 Jul 2;164:60-66. doi: 10.1016/j.maturitas.2022.06.011. Online ahead of print.

Increased mortality and non-cancer morbidity risk may be associated with early menopause and varies with aetiology: An exploratory population-based study using data-linkage

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Objective: Iatrogenic early menopause (EM), that is, menopause before the age of 45 years due to surgery or chemotherapy or radiotherapy, is associated with negative health impacts. However, it is unclear how these vary according to the cause of EM. We investigated mortality and non-cancer morbidity in women with iatrogenic EM of different aetiologies. Study design: Population-based retrospective cohort study with 36-year follow-up using data-linkage with the Western Australia hospital morbidity database, cancer, birth and death registries, the midwives notification system and the mental health information system. The sample comprised women aged 20-44 years at index date with iatrogenic EM associated with breast or gynaecological cancer (n = 607), or benign bilateral oophorectomy (n = 414), and age-matched female controls (n = 16,998). Index date (breast, ovarian or uterine cancer diagnosis or oophorectomy procedure) ranged from 1982 to 1997, with follow-up until 2018. Main outcome measures: Mortality and hospitalisation for circulatory disorders, endocrine, psychological, respiratory, musculoskeletal and gastrointestinal morbidities. Results: Significant differences in mortality were observed (% dead by follow-up: cancer, 53.0; oophorectomy, 10.9; and controls, 3.5; $p < 0.001$). Incidence rate ratios (IRRs) were increased for circulatory (1.23, 95 % CI 1.07-1.42) and endocrine disorders (1.31, 95%CI 1.08-1.56) and hip fracture (3.90, 95 % CI 1.83-7.40) in cancer survivors, compared with controls. IRRs for circulatory (0.62, 95 % CI 0.53-0.72) and endocrine disorders (0.62, 95 % CI 0.38-0.97) were reduced in the oophorectomy group, but were increased for psychological (8.53, 95 % CI 7.29-9.94) and gastrointestinal morbidities (1.43, 95%CI 1.21-1.67) compared with controls. Conclusion: Cancer-related or benign iatrogenic EM may be associated with increased mortality and morbidity, which vary with the cause of EM.

Menopause. 2022 Jul 1;29(7):767-794. doi: 10.1097/GME.0000000000002028.

The 2022 hormone therapy position statement of The North American Menopause Society

"The 2022 Hormone Therapy Position Statement of The North American Menopause Society" (NAMS) updates "The 2017 Hormone Therapy Position Statement of The North American Menopause Society" and identifies future research needs. An Advisory Panel of clinicians and researchers expert in the field of women's health and menopause was recruited by NAMS to review the 2017 Position Statement, evaluate new literature, assess the evidence, and reach consensus on recommendations, using the level of evidence to identify the strength of recommendations and the quality of the evidence. The Advisory Panel's recommendations were reviewed and approved by the NAMS Board of Trustees.Hormone therapy remains the most effective treatment for vasomotor symptoms (VMS) and the genitourinary syndrome of menopause and has been shown to prevent bone loss and fracture. The risks of hormone therapy differ depending on type, dose, duration of use, route of administration, timing of initiation, and whether a progestogen is used. Treatment should be individualized using the best available evidence to maximize benefits and minimize risks, with periodic reevaluation of the benefits and risks of continuing therapy.For women aged younger than 60 years or who are within 10 years of menopause onset and have no contraindications, the benefit-risk ratio is favorable for treatment of bothersome VMS and prevention of bone loss. For women who initiate hormone therapy more than 10 years from menopause onset or who are aged older than 60 years, the benefit-risk ratio appears less favorable because of the greater absolute risks of coronary heart disease, stroke, venous thromboembolism, and dementia. Longer durations of therapy should be for documented indications such as persistent VMS, with shared decision-making and periodic reevaluation. For bothersome genitourinary syndrome of menopause symptoms not relieved with over-the-counter therapies in women without indications for use of systemic hormone therapy, low-dose vaginal estrogen therapy or other therapies (eg, vaginal dehydroepiandrosterone or oral ospemifene) are recommended.

Menopause. 2022 Jul 1;29(7):805-815. doi: 10.1097/GME.0000000000001988.

Risk of high depressive symptoms after the final menstrual period: the Study of Women's Health Across the Nation (SWAN)

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Objective: To examine depressive symptoms during postmenopause and the contribution of depressive symptom trajectories before the final menstrual period (FMP) and psychosocial/health factors to postmenopause depressive symptoms. Methods: Longitudinal analysis of depressive symptoms (Center for Epidemiologic Studies-Depression scale) collected every 1 to 2 years from 1996 to 2017 from 1,551 midlife women in the Study of Women's Health Across the Nation for a median follow-up of 19.0 years. Latent class growth analysis identified depression trajectories from baseline to FMP. Multivariable random effects (woman as random effect) linear or logistic regression models were conducted. Results: Women had higher odds of reporting high depressive symptom score (≥16) during postmenopause than when they were premenopausal (OR = 1.49, 95% CI, 1.09-2.04), but not when perimenopausal. Three pre-FMP trajectories were identified: Group 1 (47.7%), consistently low scores, Group 2 (39.9%), moderate scores below the high depressive symptom threshold, and Group 3 (12.4%), consistently high scores. Both the moderate (OR = 2.62, 95% CI, 1.89-3.66) and high score (OR = 6.88, 95% CI, 4.72-10.02) groups, compared with the consistently low group, had significantly higher postmenopausal depressive symptom scores. Other pre-FMP variables associated with high postmenopausal depressive symptoms were: higher odds of childhood trauma/maltreatment, poor role physical, high anxiety symptoms, sleep problems, high vasomotor symptoms, and lower odds for chronological aging and lower social support. Conclusions: Compared with premenopause, postmenopause remains a period of increased risk for higher depressive symptoms, especially for women with pre-FMP depressive symptoms. Pre-FMP depressive symptom trajectories are highly predictive of postmenopause depressive symptoms independent of health and psychosocial factors.