



## Selección de Resúmenes de Menopausia

Semana del 29 de marzo a 4 de abril, 2023

María Soledad Vallejo. Clínica Quilín. Universidad de Chile

**Climacteric. 2023 Mar 31;1-10. doi: 10.1080/13697137.2023.2190511. Online ahead of print. -25**

### Postmenopausal women's cognitive function and performance of virtual reality tasks

J Zangirolami-Raimundo, R D Raimundo, P R E Silva Noll, W S Dos Santos, C Leone, E C Baracat, et al.

Objective: This study aimed to assess whether prior knowledge of computer use determines performance of virtual reality tasks by postmenopausal women and whether menopausal symptoms, sociodemographic factors, lifestyle and cognition modify or interfere with their performance. Method: This cross-sectional study included 152 postmenopausal women divided into two groups: computer users and non-users. Age, ethnicity, time of menopause, menopausal symptoms, female health status, level of physical activity and cognitive function were considered. The participants played a virtual reality game and were assessed for hits, errors, omissions and game time. The Mann-Whitney, chi-square and Fisher exact tests and multivariate linear regression analysis were used. Results: Postmenopausal computer users play virtual reality games ( $p = 0.005$ ) better than postmenopausal non-users of computers. Vasomotor symptoms were high in women who used computers compared to those who did not ( $p = 0.006$ ). Multivariate linear regression analysis found that the best-fitting predictors for the number of hits - that is, age ( $p = 0.039$ ), Mini-Mental State Examination score ( $p = 0.006$ ) and the headache symptom ( $p = 0.021$ ) - influence the performance of virtual reality tasks. Conclusion: Computer users performed virtual reality tasks better than non-users. Headache and age but not vasomotor symptoms negatively affected the postmenopausal women's performance.

**BMC Geriatr. 2023 Mar 31;23(1):201. doi: 10.1186/s12877-023-03910-5.**

### Cause-specific excess mortality after hip fracture: the Norwegian Epidemiologic Osteoporosis Studies (NOREPOS)

Kristin Holvik 1, Christian Lycke Ellingsen 2 3, Siri Marie Solbakken 4, Trine Elisabeth Finnes 5 6, et al.

Background: Information on cause of death may help appraise the degree to which the high excess mortality after hip fracture reflects pre-existing comorbidities or the injury itself. We aimed to describe causes of death and cause-specific excess mortality through the first year after hip fracture. Methods: For studying the distribution of causes of death by time after hip fracture, we calculated age-adjusted cause-specific mortality at 1, 3, 6 and 12 months in patients hospitalized with hip fracture in Norway 1999-2016. Underlying causes of death were obtained from the Norwegian Cause of Death Registry and grouped by the European Shortlist for Causes of Death. For estimating excess mortality, we performed flexible parametric survival analyses comparing mortality hazard in patients with hip fracture (2002-2017) with that of age- and sex matched controls drawn from the Population and Housing Census 2001. Results : Of 146,132 Norwegians with a first hip fracture, a total of 35,498 (24.3%) died within one year. By 30 days post-fracture, external causes (mainly the fall causing the fracture) were the underlying cause for 53.8% of deaths, followed by circulatory diseases (19.8%), neoplasms (9.4%), respiratory diseases (5.7%), mental and behavioural disorders (2.0%) and diseases of the nervous system (1.3%). By one-year post-fracture, external causes and circulatory diseases together accounted for approximately half of deaths (26.1% and 27.0%, respectively). In the period 2002-2017, cause-specific one-year relative mortality hazard in hip fracture patients vs. population controls ranged from 1.5 for circulatory diseases to 2.5 for diseases of the nervous system in women, and correspondingly, from 2.4 to 5.3 in men. Conclusions: Hip fractures entail high excess mortality from all major causes of death. However, the traumatic injury of a hip fracture is the most frequently reported underlying cause of death among older patients who survive less than one year after their fracture.

**iScience. 2023 Apr 21;26(4):106401. doi: 10.1016/j.isci.2023.106401. Epub 2023 Mar 15.**

### A retrospective case-control study on menstrual cycle changes following COVID-19 vaccination and disease

Alexandra Alvergne 1 2, Gabriella Kountourides 2, M Austin Argentieri 2 3, Lisa Agyen 4, Natalie Rogers 4, et al.

There has been increasing public concern that COVID-19 vaccination causes menstrual disturbance regarding the relative effect of vaccination compared to SARS-CoV-2 infection. Our objectives were to test potential risk factors for

reporting menstrual cycle changes following COVID-19 vaccination and to compare menstrual parameters following COVID-19 vaccination and COVID-19 disease. We performed a secondary analysis of a retrospective online survey conducted in the UK in March 2021. In pre-menopausal vaccinated participants (n = 4,989), 18% reported menstrual cycle changes after their first COVID-19 vaccine injection. The prevalence of reporting any menstrual changes was higher for women who smoke, have a history of COVID-19 disease, or are not using estradiol-containing contraceptives. In a second sample including both vaccinated and unvaccinated participants (n = 12,579), COVID-19 vaccination alone was not associated with abnormal menstrual cycle parameters, while a history of COVID-19 disease was associated with an increased risk of reporting heavier bleeding, "missed" periods, and inter-menstrual bleeding.

**Breast Cancer (Dove Med Press). 2023 Mar 22;15:227-235. doi: 10.2147/BCTT.S390664. eCollection 2023.**

## **Re-Evaluating the Association Between Hormonal Contraception and Breast Cancer Risk**

Sanjana Satish 1, Jessica F Moore 2, Jay M Littlefield 3, Ian J Bishop 2, Kristin E Rojas 2 4

This review aims to summarize and assess key studies investigating the relationship between hormonal contraception and breast cancer risk. Approximately two-thirds of breast cancers express the estrogen receptor, and long-term exposure to estrogen is a debated risk factor for breast cancer development. This hypothesis is based on prior studies looking at reproductive risk factors (endogenous estrogen exposure) along with hormone replacement therapy (exogenous hormone exposure). Historically accepted reproductive risk factors include age at menarche, age at first delivery, and parity. Exogenous hormone exposure encompasses both receipt of hormonal contraception and menopausal hormone replacement therapy. This review highlights the reported risks associated with the most common hormonal contraception methods including oral, transdermal, and transvaginal routes. Large observational studies of the past and more recent works are summarized highlighting gaps in knowledge. Several themes emerge: difficulty accounting for well-established risk factors in analyses of epidemiologic studies, challenges determining whether associations between hormonal contraception and breast cancer are due to the exogenous hormones themselves or to increased engagement with the medical system, and discrepancies between statistically significant and clinically significant risk, odds, and hazard ratios. Understanding the strengths and limitations of these studies will help providers in and outside of oncology support women making decisions regarding both cancer risk-reduction and family planning.

**Cancers (Basel). 2023 Mar 10;15(6):1708. doi: 10.3390/cancers15061708.**

## **Impact of Hormone Replacement Therapy on Risk of Ovarian Cancer in Postmenopausal Women with De Novo Endometriosis or a History of Endometriosis**

Hee Joong Lee 1, Banghyun Lee 2, Hangseok Choi 3, Taehee Kim 2, Yejeong Kim 2, Yong Beom Kim 4

The effect of hormone replacement therapy (HRT) on the malignant transformation of postmenopausal endometriosis remains unclear. This study aimed to investigate the impact of HRT on ovarian cancer occurrence in postmenopausal women with de novo endometriosis or a history of endometriosis. A total of 10,304 women that received HRT (the HRT group) and 10,304 that did not (the control group) were selected by 1:1 matching those that met the study criteria. Incidences of ovarian cancer (0.3% in the HRT group and 0.5% in the control group) and cumulative incidence rates of ovarian cancer were similar in the two groups. The overall mean duration of HRT was  $1.4 \pm 2.2$  years, but the duration of HRT in women with ovarian cancer was  $2.2 \pm 2.9$  years. After adjusting for co-variables, receipt of HRT, duration of HRT, combined use of estrogen and progesterone, and tibolone were not found to be risk factors for ovarian cancer. However, the use of estrogen alone was found to be a significant risk factor for ovarian cancer (HR 2.898; 95% CI 1.251-6.715;  $p = 0.013$ ). With the exception of HRT using estrogen alone, HRT did not increase the risk of ovarian cancer in postmenopausal women with a history of endometriosis or de novo endometriosis.

**Climacteric. 2023 Mar 28;1-7. doi: 10.1080/13697137.2023.2190507. Online ahead of print.**

## **Efficacy and safety of ultra-low-dose estradiol and norethisterone in postmenopausal Brazilian women**

R Bonassi Machado 1, L de Melo Pompei 2, E A P Nahas 3, J Nahas-Neto 3, L da Costa-Paiva 4, et al.

Objective: This study aimed to evaluate the efficacy and safety of oral ultra-low-dose continuous combination of 17 $\beta$ -estradiol (17 $\beta$ -E2) and norethisterone acetate (NETA) in postmenopausal Brazilian women. Methods: Postmenopausal

women (age 45-60 years) with amenorrhea >12 months and intact uterus, with moderate to severe vasomotor symptoms, were included. The vasomotor symptoms and endometrial bleeding were evaluated by a daily diary for 24 weeks, and the women were assessed at baseline and endpoint. Results: A total of 118 women were included. The group treated with 0.5 mg 17 $\beta$ -E2/0.1 mg NETA (n = 58) showed a percentage reduction of 77.1% in the frequency of vasomotor symptoms versus 49.9% in the placebo group (n = 60) (p = 0.0001). The severity score showed a reduction in the treatment group when compared to the placebo (p < 0.0001). The adverse events were comparable between the groups; however, in the 0.5 mg 17 $\beta$ -E2/0.1 mg NETA group there were more complaints of vaginal bleeding; despite that, in most cycles in both treatment groups, more than 80% of women experienced amenorrhea. Conclusions: The combination of 0.5 mg 17 $\beta$ -E2/0.1 mg NETA in a continuous combination regimen was shown to be effective in reducing the frequency and severity of vasomotor symptoms in Brazilian postmenopausal women.

**Medicines (Basel). 2023 Feb 27;10(3):19. doi: 10.3390/medicines10030019.**

### **Clinical Benefit of Autologous Platelet-Rich Plasma Infusion in Ovarian Function Rejuvenation: Evidence from a Before-After Prospective Pilot Study**

Athanasios Garavelas 1, Panagiotis Mallis 2, Efstathios Michalopoulos 2, Eros Nikitos 1

Background: The intraovarian administration of autologous platelet-rich plasma (PRP) acts beneficially for the stimulation of follicle production in women presenting different forms of ovarian dysfunction. This pilot study aimed to evaluate and provide significant data regarding the efficacy of PRP to rejuvenate the ovaries. Methods: A total of 253 women aged 22-56 years, were divided into five groups, based on their status. All participants signed for informed consent for the current study. Blood sampling, preparation of PRP and intraovarian infusion of the latter were performed on all participants. The evaluation of PRP efficacy, a two-month follow-up detecting the levels of follicle-stimulating hormone (FSH), luteinizing hormone (LH), estradiol (E2) and anti-mullerian hormone (AMH), was performed for all participants. For women with advanced ages (>48 years), the restoration and regularity of the menstrual cycle were additionally evaluated. Results: After the two-month follow-up, the majority of the participants presented improvement in their hormonal profiles. Additionally, 17% of the women in this pilot study successfully conceived. The restoration of the menstrual cycle was detected in 15% of the women with advanced ages. Conclusions: Intraovarian infusion of autologous PRP exhibited remarkable evidence and promising results to restore ovarian insufficiency.

**J Nutr Health Aging. 2023;27(3):228-237. doi: 10.1007/s12603-023-1898-1.**

### **Association between Dairy Product intake and Risk of Osteoporotic Fractures in Postmenopausal Japanese Women: Secondary Analysis of 15-Year Follow-Up data from the Japanese Population-Based Osteoporosis (JPOS) Cohort Study**

A Kojima 1, K Kamiya, E Kajita, T Tachiki, Y Sato, K Kouda, K Uenishi, J Tamaki, S Kagamimori, M Iki

Objectives: Few prospective cohort studies have evaluated the relationship between dairy product intake frequency and risk of osteoporotic fractures in Asians. This study aimed to investigate the association between habitual dairy product intake and risk of osteoporotic fractures. Design: Secondary analysis of prospective cohort study. Setting: Five municipalities of Japan. Participants: This study included 1,429 postmenopausal Japanese women (age  $\geq$ 45 years at baseline). Measurements: Baseline milk-intake frequency was obtained using nurse-administered questionnaires. Intakes of yogurt and cheese, and estimated calcium intake, were assessed using a validated food frequency questionnaire. Osteoporotic fracture was defined as a clinical fracture diagnosed using radiography. Hazard ratios (HRs) with 95% confidence intervals (CIs) were estimated using Cox proportional hazards models. Results: Over a median follow-up period of 15.1 years (interquartile range [IQR], 10.1-15.4 years; total, 18,118 person-years), 172 women sustained at least one osteoporotic fracture. The proportions of participants with milk intakes <1, 1, and  $\geq$ 2 cups/d were 34.4%, 48.0%, and 17.6%, respectively. After adjustment for age, frequency of yogurt intake, frequency of cheese intake, body mass index, history of osteoporotic fractures, and frequency of natto intake, the HRs compared with that for milk intake <1 cup/d were 0.71 (95% CI: 0.51-0.98) and 0.57 (95% CI: 0.35-0.92) for 1 cup/d and  $\geq$ 2 cups/d, respectively. After adjustment for bone mineral density, HR significance for milk intakes  $\geq$ 2 cups/d remained significant. Yogurt and cheese intakes were not related to the risk of osteoporotic fractures. Conclusion: High habitual milk intake, but not a habitual yogurt or cheese intake is associated with a decreased risk of osteoporotic fractures, independent of bone mineral density, in postmenopausal Japanese women.