

## Selección de Resúmenes de Menopausia

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María Soledad Vallejo. Obstetricia y Ginecología. Hospital Clínico. Universidad de Chile

**Immunol Rev. 2026 Mar;338(1):e70096. doi: 10.1111/imr.70096. (FREE)**

### **Sex Matters: Hormonal and Chromosomal Determinants of Autoimmunity and Anti-Cancer Immunity Across the Lifespan**

Christian G Bustillos 1, Esther M Peluso 2 3, Sophia L Cha 1 3, Melissa G Lechner 4, Maureen A Su 1 5

Sex plays a key role in shaping both anti-cancer immunity and autoimmunity. Biological factors underlying sexual dimorphism have now been identified in multiple aspects of anti-cancer immunity and autoimmunity. These factors include sex differences in hormone levels, chromosome complement, and expression of the long non-coding RNA XIST. In this review, we discuss recent advances delineating how these differences alter immune responses against cancer and autoimmune responses against healthy tissues. Moreover, we now understand that hormone levels change (e.g., in mini-puberty, menopause, and andropause) and that somatic alterations in chromosomal complement accumulate (e.g., loss of Y [LOY] chromosome) across the lifespan. We also include here a discussion of how these changes affect anti-cancer immunity and autoimmunity across a lifetime. These recent advances will set the stage for identifying immunotherapeutic approaches that optimize anti-cancer immunity while controlling the autoimmune responses.

**JACC Adv. 2026 Jan 23;5(2):102561. doi: 10.1016/j.jacadv.2025.102561. Online ahead of print.**

### **Hormone Replacement Therapy and Cardiovascular Outcomes by Race and Ethnicity: MESA (Multi-Ethnic Study of Atherosclerosis)**

Spencer Flynn 1, Amier Haidar 2, Icy Liang 3, Karol Watson 4, Tamara Horwich 5, Preethi Srikanthan 6

Background: There is mixed data regarding hormone replacement therapy (HRT) and cardiovascular disease (CVD), particularly on how timing of HRT initiation close to menopause may affect outcomes, and there is little data among different race/ethnicity groups. Objective: The purpose of this study was to how HRT use and cardiovascular outcomes differ by race/ethnicity. Methods: The Multi-Ethnic Study of Atherosclerosis is a prospective epidemiologic study of participants without CVD at enrollment. Outcomes were (1) all-cause mortality and (2) major adverse cardiovascular events (MACEs). Cox models were developed, focusing on the timing of HRT initiation and differences by race/ethnicity (White, Black, Hispanic, and Chinese). Results: There were 2,427 postmenopausal women with data on HRT and outcomes, followed up for a median of 14 years. HRT use within 5 years of menopause was associated with decreased MACE and all-cause mortality (HR: 0.72 [95% CI: 0.55-0.96] and HR 0.62 [95% CI: 0.48-0.80], respectively). These findings differed by racial/ethnic groups, with Chinese participants on HRT having increased MACE and a trend towards increased mortality (HR: 2.27 [95% CI: 1.06-4.87] and HR: 1.34 [95% CI: 0.73-2.47], respectively). These findings were only seen in Chinese participants who had the metabolic syndrome or elevated triglyceride levels. Conclusions: We found relative benefit with early initiation of HRT in all race/ethnic groups except Chinese, adding to the complex literature on HRT use in CVD primary prevention. However, Chinese women with the metabolic syndrome or elevated triglycerides may have increased risk of adverse cardiovascular outcomes with HRT, suggesting further research is needed on racial and metabolic differences in the cardiovascular impact of HRT use.

**Atherosclerosis. 2026 Jan 20;414:120641. doi: 10.1016/j.atherosclerosis.2026.120641. Online ahead of print.**

### **Sex-specific differences in cardiovascular risk factors and their management**

Lale Tokgozoglu 1, Meral Kayikcioglu 2, Jeanine Roeters van Lennep 3

Atherosclerotic cardiovascular disease (ASCVD) remains the leading cause of mortality in both sexes globally. However, sex-specific differences in risk factor prevalence, pathophysiology, clinical presentation, and treatment outcomes demand nuanced understanding and tailored management approaches. This review examines the biological and gender-related drivers of ASCVD risk, focusing on hypertension, dyslipidemia, diabetes, obesity, smoking, inflammation, and female-specific factors such as pregnancy complications and menopause. The underrepresentation of women in cardiovascular research, combined with therapeutic inertia and gaps in preventive care, has led to suboptimal

outcomes. We discuss current evidence, highlight knowledge gaps, and call for more research initiatives to reduce the burden of ASCVD in women.

**Observational Study Medicine (Baltimore). 2026 Jan 23;105(4):e47348. doi: 10.1097/MD.00000000000047348.**

## **Does adding physical activity improve spinal bone mineral density in postmenopausal women?: A cross-sectional analysis of NHANES 2011 to 2018**

Yandong Wang 1, Bo Liu 2, Jinbo Wang 2, Yuanhao Wang 2, Cong Chen 2, Peng Wang 2

Physical activity (PA) is recommended for managing postmenopausal osteoporosis, yet evidence-based prescriptions for optimizing bone mineral density (BMD) remain undefined. To identify beneficial PA thresholds, this study examined the relationship between PA and total lumbar BMD in a cross-sectional analysis of 9339 postmenopausal women from the National Health and Nutrition Examination Survey 2011 to 2018. PA was quantified as Physical Activity Metabolic Equivalent of Task (PA-MET)-hours/week. The association between PA-MET-hours/week and total lumbar BMD was assessed using weighted multivariable linear regression. Nonlinear relationships were explored with smooth curve fitting and two-piecewise linear models. Subgroup analyses were stratified by age and body mass index (BMI). A significant positive association was observed between PA-MET-hours/week and total lumbar BMD ( $\beta = 0.0000$ , 95% CI [0.0000, 0.0001],  $P = .023$ ), which was more pronounced among younger individuals (<45 years) and those with lower BMI (<25 kg/m<sup>2</sup>). The relationship exhibited a nonlinear pattern, with an inflection point at 32 metabolic equivalent of task (MET)-h/week. Subgroup analyses further identified specific beneficial thresholds, 54 MET-hours/week for younger adults (<45 years;  $\beta = 0.0004$ , 95% CI [0.0002, 0.0005],  $P < .0001$ ) and 128 MET-hours/week for those with normal BMI (<25 kg/m<sup>2</sup>;  $\beta = 0.0003$ , 95% CI [0.0001, 0.0004],  $P < .0001$ ). PA is positively associated with total lumbar BMD in postmenopausal women. Moderate-intensity PA of approximately 13.5 hours/week for younger individuals (corresponding to the inflection point of 54 MET-hours/week) or 32 hours/week (corresponding to the inflection point of 32 MET-hours/week) for those with normal BMI may be beneficial for lumbar spine bone health in postmenopausal women.

**BJOG. 2026 Jan 22. doi: 10.1111/1471-0528.70158. Online ahead of print.**

## **Sexual Function, Activity and Distress 24 Months After Surgical Menopause: What Happens After Menopause (WHAM)-A Prospective Controlled Study**

Martha Hickey 1, Trevor Tejada-Berges 2, Susan M Domchek 3, Efrosinia O Krejany 4, Alison Brand 5 6, et al.

Objective: To determine the effect of surgical menopause (risk-reducing salpingo-oophorectomy, RRSO) on sexual function and the modifying effects of HRT. Design: Prospective observational study of women undergoing RRSO and age-matched comparison group who retained their ovaries. Setting: High-risk clinics and general population. Methods: Sexual function was measured at baseline, 3, 6, 12 and 24 months. Main outcome measures: Primary outcome was sexual function at 24 months using the Female Sexual Function Index (FSFI). Secondary outcomes included the Fallowfield Sexual Activity Questionnaire (SAQ) and Female Sexual Distress Scale-Revised (FSDS-R). Results: Baseline sexual function was similar between groups. At 24 months, sexual dysfunction increased from 19% to 42% after RRSO versus 24% to 29% in comparisons (Odds Ratio (OR) 1.9, 95% CI 0.7-5.1;  $p = 0.21$ ). Compared to comparisons, sexual desire (-0.4,  $p = 0.02$ ), arousal (-0.7,  $p < 0.001$ ), lubrication (-0.6,  $p = 0.01$ ) and satisfaction (-0.6,  $p < 0.001$ ) were significantly reduced in the RRSO group. Sexual pain (-0.5,  $p = 0.05$ ) and discomfort (-1.0,  $p < 0.001$ ) increased after RRSO; sexual habit was unchanged. Sexual distress nearly quadrupled in the RRSO group (OR 3.7, 95% CI 1.6-9.0;  $p = 0.003$ ). After RRSO, 61% commenced HRT. HRT was not associated with sexual function, activity or distress. Conclusions: Sexual dysfunction and distress increased after RRSO. Use of HRT was not associated with better sexual function.

**Maturitas. 2026 Jan 18;206:108835. doi: 10.1016/j.maturitas.2026.108835. Online ahead of print.**

## **Reproductive factors and the risk of pelvic organ prolapse in postmenopausal women: A nationwide cohort study**

Log Young Kim 1, Jin-Sung Yuk 2

Objective: To examine associations between reproductive factors and the risk of pelvic organ prolapse in postmenopausal women. Study design: This nationwide retrospective cohort study included postmenopausal women aged 40 to 79 years who participated in a national health screening program in the period 2009-2012 in Korea.

Participants were followed until 2022. Main outcome measures: Clinically treated pelvic organ prolapse, defined by concurrent diagnosis and procedure codes (surgery or pessary). Results: Among 3,743,520 women, 34,792 (0.9%) developed pelvic organ prolapse during a median follow-up of 10 years, corresponding to an incidence rate of 938 per 100,000 person-years. In fully adjusted models, having two or more births was the strongest predictor of pelvic organ prolapse (hazard ratio 1.751; 95% confidence interval 1.561-1.963). Breastfeeding  $\geq 12$  months (hazard ratio 1.297; 95% confidence interval 1.228-1.369), oral contraceptive use  $\geq 1$  year (hazard ratio 1.067; 95% confidence interval 1.024-1.112), menopausal hormone therapy for 2-4 years (hazard ratio 1.083; 95% confidence interval 1.022-1.147), age at menopause  $\geq 55$  years (hazard ratio 1.064; 95% confidence interval 1.031-1.098), and reproductive span  $\geq 40$  years (hazard ratio 1.169; 95% confidence interval 1.112-1.229) were each modestly associated with increased risk of pelvic organ prolapse. Age at menarche showed no association. Trends across exposure categories were significant for all factors except menarche. In women with parity 0 or 1, most reproductive factors were unrelated to pelvic organ prolapse, but prolonged breastfeeding ( $\geq 12$  months) had a significant association (hazard ratio 1.348; 95% confidence interval 1.164-1.561). Conclusion: Having multiple births and prolonged breastfeeding are key independent risk factors for pelvic organ prolapse in postmenopausal women. Other reproductive and hormonal factors have only minor effects.

**Front Aging Neurosci. 2026 Jan 6;17:1697255. doi: 10.3389/fnagi.2025.1697255. eCollection 2025.**

### **Follicle-stimulating hormone linked to cognitive decline and amyloid burden in postmenopausal women**

Sheng-Min Wang 1, Chaiho Jeong 2, Yoo Hyun Um 3, Dong Woo Kang 4, Sunghwan Kim 1, Soyoung Lee 5 6, Introduction: Women have a higher risk of developing Alzheimer's disease (AD) than men, with hormonal changes during menopause being a potential factor. However, the exact relationship between these hormonal changes, cognitive function, and AD pathology is not fully understood. This study investigates the differential associations between serum follicle-stimulating hormone (FSH) and estradiol levels with cognitive function and cerebral amyloid- $\beta$  ( $A\beta$ ) deposition, quantified using amyloid positron emission tomography, in postmenopausal women across the spectrum from cognitively normal aging to AD dementia. Methods: A total of 884 postmenopausal women, aged 60 years or older, were enrolled in the study. Participants were classified into three groups based on their cognitive function: cognitively normal (CN), mild cognitive impairment (MCI), and AD dementia. Results: Higher FSH levels were associated with poorer cognitive performance and greater cerebral  $A\beta$  deposition in postmenopausal women. FSH levels were highest in women with AD dementia, followed by those with MCI, and lowest in CN participants. No significant relationship was observed between estradiol levels and cognitive outcomes or  $A\beta$  burden. Further analysis showed a positive correlation between FSH levels and global as well as regional cerebral  $A\beta$  deposition. Mediation analysis indicated that FSH's impact on cognitive function was mediated by cerebral  $A\beta$  burden. Estradiol levels, however, had no significant association with either cognitive performance or  $A\beta$  pathology. Discussion: Elevated FSH, not low E2, is linked to cognitive decline and  $A\beta$  pathology in postmenopausal women. FSH may be a key risk factor for cerebral  $A\beta$  deposition and cognitive decline in older women. Further research is needed to elucidate the mechanisms involved and explore hormonal interventions for AD.