

Selección de Resúmenes de Menopausia

Semana del 6 al 12 de mayo, 2026

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Follow-up by resident physicians is associated with underuse of hormone replacement therapy after cervical cancer treatment: A retrospective study

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Objective: To evaluate the current status of hormone replacement therapy (HRT) use after cervical cancer treatment and identify factors associated with its implementation, in particular, follow-up by resident physicians. **Methods:** We included patients with International Federation of Gynecology and Obstetrics 2018 stage IB2-IIB or IIIC1-2 cervical cancer treated at our institution between January 2009 and December 2022 with radical hysterectomy followed by adjuvant therapy or definitive concurrent chemoradiotherapy. We excluded patients with preserved ovarian function or age ≥ 56 years at oophorectomy. The primary endpoint was HRT initiation after treatment. Analyzed factors included age (<45 vs. ≥ 45 years), surgical treatment, and follow-up by resident physicians. We performed logistic regression to identify factors associated with HRT use. **Results:** We included 94 patients in the final analysis. HRT was prescribed to 24 patients (25.5%). HRT use was higher in patients aged <45 years (43.6% vs. 12.7%) and in those who underwent surgery (41.5% vs. 13.2%). HRT was initiated in 14.3% and 42.1% of patients followed up by resident physicians and senior physicians, respectively. In multivariable analysis, age <45 years (odds ratio [OR]: 4.47; 95% confidence interval [CI]: 1.50-13.33, $p = 0.007$) was independently associated with increased HRT use, whereas follow-up by resident physicians was independently associated with decreased HRT use (OR: 0.312; 95% CI: 0.101-0.962, $p = 0.043$). **Conclusion:** HRT use after cervical cancer treatment remains suboptimal and is influenced by both patient age and the follow-up system. Structured education and dissemination of clinical guidelines may be important to improve appropriate HRT implementation in survivorship care.

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Later Menopause Confers No Additional Protection Against Osteoporosis in Older Women

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Background: Previous studies may have overestimated the effect of age at menopause when assessing osteoporosis risk and may have overlooked women with late menopause as a high-risk group. Therefore, we aim to clarify the association between age at menopause and osteoporosis risk, as well as to identify key characteristics of individuals with osteoporosis. **Methods:** This study utilized a nationally representative cross-sectional sample, including 5,804 postmenopausal women aged 55-79 years. Weighted multivariate linear regression and logistic regression models were used to assess the association between age at menopause and femoral neck BMD and osteoporosis. Core characteristics of the osteoporosis population were identified by calculating standardized coefficients and applying SHapley additive interpretation (SHAP) analysis. Restricted cubic spline (RCS) analysis and subgroup analysis were conducted on these core characteristics. **Results:** The age at menopause showed no significant association with osteoporosis risk in any model ($P > 0.05$). The two primary modifiable factors associated with reduced osteoporosis risk were BMI (OR = 0.84, 95% CI: 0.80-0.88) and hormone-use history (OR = 0.50, 95% CI: 0.33-0.74). Furthermore, RCS analyses revealed significant nonlinear relationships between age at menopause and both BMI ($P < 0.001$) and hormone-use history ($P < 0.001$). Subgroup analyses indicated that the compensatory effects of these two factors varied across different specific subgroups. **Conclusion:** This study reveals that the initial protective advantage in reducing osteoporosis risk conferred by a later age at menopause diminishes in later life. Maintaining a higher BMI and appropriate hormone therapy can effectively compensate for the initial risk disadvantage.

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Recent advances in the relationship between mental symptoms in postmenopausal women and estrogen fluctuations

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Background: Estrogen fluctuations during menopause are linked to increased psychiatric symptoms like depression and anxiety. Depression rates in menopausal women are 2-3 times higher than in premenopausal women, primarily due to rapid estrogen changes. Estrogen affects emotional stability by regulating neurotransmitters, adjusting HPA axis sensitivity, and influencing neuroinflammatory and epigenetic pathways. Menopausal hormone therapy (MHT) is a key treatment, stabilizing neurotransmitter systems and HPA axis activity, but requires personalized and evidence-based approaches. **Objective:** This paper aims to systematically summarize the association between estrogen fluctuations and menopausal psychiatric symptoms, elucidate the underlying physiological and molecular mechanisms driving these symptoms, and evaluate the therapeutic potential of MHT, so as to provide a robust theoretical basis for clinical decision-making in menopausal mental health management. **Methods:** We performed a thorough review of peer-reviewed studies from medical and psychiatric databases, examining the connections between menopausal estrogen changes, neurotransmitter regulation, HPA axis function, neuroinflammation, epigenetic changes, and the effectiveness and safety of MHT for managing psychiatric symptoms. We prioritized high-quality clinical trials, epidemiological studies, and mechanistic research to ensure reliable evidence. **Results:** The review highlights that sudden estrogen changes during menopause disrupt serotonin and norepinephrine signaling, alter HPA axis activity, and trigger neuroinflammation and epigenetic changes, increasing the risk of depression and anxiety. Menopausal hormone therapy (MHT) can alleviate these symptoms by restoring neurotransmitter balance and normalizing HPA axis function. However, its effectiveness depends on factors like treatment timing, hormone type, and individual patient characteristics, including medical history and symptom severity. **Conclusion:** Estrogen fluctuation is a significant modifiable risk factor for psychiatric symptoms during menopause, affecting neurotransmitter, endocrine, inflammatory, and epigenetic pathways. Menopausal hormone therapy (MHT) is effective for symptom management when personalized and administered within recommended timeframes. This underscores the importance of assessing estrogen levels and psychiatric symptoms in menopausal women to optimize MHT and enhance mental health outcomes.

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Effectiveness of non-pharmacological interventions for insomnia related to natural menopause: A meta-analysis of randomized controlled trials

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Insomnia is common in the general population and is more prevalent in menopausal women. This meta-analysis synthesized and assessed the effect of non-pharmacological interventions for insomnia related to natural menopause. Comprehensive searches for randomized controlled trials were conducted across multiple databases from inception to February 2025, including PubMed, Web of Science, Embase, and the Cochrane Library. Sleep quality was evaluated with the Pittsburgh Sleep Quality Index, and insomnia was evaluated with the Insomnia Severity Index. The risk of bias was evaluated with the revised Cochrane RoB 2 tool, and random effects models were used for meta-analyses. Twenty-two studies with a total of 1648 participants were analyzed. Non-pharmacological interventions significantly reduced PSQI and ISI scores. In a subgroup analysis, cognitive behavioral therapy, exercise, acupuncture, acupressure, and integrated interventions all improved low sleep quality in women after natural menopausal (cognitive behavioral therapy: MD -3.38, 95% CI -4.15 to -2.62, $P < 0.01$, heterogeneity $I^2 = 0\%$, $P = 0.67$; exercise: MD -1.17, 95% CI -1.88 to -0.47, $P < 0.01$; heterogeneity $I^2 = 24\%$, $P = 0.27$; acupuncture: MD -6.25, 95% CI -7.64 to -4.87, $P < 0.01$, heterogeneity $I^2 = 22\%$, $P = 0.26$; self-administered acupressure: MD -2.26, 95% CI -3.10 to -1.43, $P < 0.01$, heterogeneity $I^2 = 0\%$, $P = 0.38$; nurse-administered acupressure: MD -7.61, 95% CI -8.30 to -6.93, $P < 0.01$, heterogeneity $I^2 = 0\%$, $P = 0.74$; integrated interventions MD -2.89, 95% CI -3.67 to -2.12, $P < 0.01$, heterogeneity $I^2 = 33\%$, $P = 0.19$). The sensitivity analysis indicated that these findings are robust. They suggest that non-pharmacological interventions are preferred options for managing insomnia related to natural menopause and may be beneficial for patients who refuse to use hypnotic medications or hormone therapy, or who have contraindications.

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Factors Associated With Menopause Symptoms: A Systematic Review and Meta-Analysis

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Background: Menopause, marked by hormonal decline and menstrual cessation, is associated with various symptoms. Socio-demographic and behavioural factors may influence symptom type and severity. Understanding these associations can inform better symptom management. **Objectives:** To identify factors associated with the presence and severity of menopausal symptoms through systematic review and meta-analysis. **Search strategy:** We searched Medline, Embase, CINAHL and Cochrane for studies on demographic, behavioural, or health factors linked to vasomotor, vaginal dryness and joint symptoms in women aged 40-60. **Selection criteria:** Studies reporting odds ratios or raw numbers for symptom presence or severity were included. **Data collection and analysis:** Studies were combined for meta-analysis, reporting odds ratios and 95% confidence intervals. **Quality assessment** was performed to quantify the risk of bias. **Results:** Of 9228 screened articles, 61 were meta-analysed. Compared with White women, Black women had higher odds of vasomotor symptom presence (OR 1.65, 1.41-1.94) and severity (OR 1.91, 1.10-3.29), and vaginal dryness presence (OR 1.27, 1.10-1.47), while Asian had lower vasomotor symptom presence and severity (OR 0.40, 0.22-0.72; OR 0.55, 0.53-0.56). Higher education (OR 1.31, 1.09-1.56), high income (OR 1.41, 1.01-1.97) and depression (OR 2.36, 1.51-3.70) were associated with increased presence of vasomotor symptoms. Smoking and obesity were associated with both presence (OR 1.63, 1.30-2.04 and 1.35, 1.02-1.78) and severity (OR 1.56, 1.07-2.27 and 1.42, 1.11-1.83) of vasomotor symptoms. **Conclusion:** Socio-demographic and behavioural factors, including ethnicity, education, income, smoking, obesity and depression, influence menopausal symptoms, highlighting the need for personalised care.

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Biological markers of aging across the menopause transition: current evidence

Regina Castaneda 1, Erin R Uddenberg 2, Maria D Hurtado Andrade 3 4, Jesse L Meek 5, Kaylin N Frankhouser, et al. **Importance and objective:** Aging is a complex biological process uniquely shaped in women by hormonal transitions, particularly across the menopause transition. While chronological age alone fails to capture individual health variability, emerging molecular biomarkers offer tools to quantify biological aging and understand mechanisms underlying age-related decline. This review synthesizes the current landscape of aging biomarkers, including senescence-associated secretory phenotype factors, epigenetic clocks, clonal hematopoiesis of indeterminate potential, and telomere length, with a particular emphasis on their relevance to menopause. **Methods:** This narrative review synthesizes human studies, translational research, and foundational basic science identified through PubMed searches through June 2025, examining aging biomarkers in general populations, among women in the menopause transition, and in relation to vasomotor symptoms and hormone therapy. **Discussion and conclusion:** Evidence demonstrates that changes in biological aging biomarkers are observed across multiple molecular systems during midlife, including the menopause transition, reflecting broader age-related biological remodeling. Postmenopausal status, particularly following early or surgical menopause, has been associated with biological aging phenotypes, including elevated senescence-associated secretory phenotype factors, epigenetic age acceleration, clonal hematopoiesis, and shorter leukocyte telomere length, likely reflecting a combination of chronological aging, hormonal changes, and individual biological vulnerability. While severe vasomotor symptoms have been linked to higher epigenetic age, hormone therapy may favorably influence certain senescence markers and biological age discrepancy. Despite these advances, significant limitations constrain clinical translation, as current biomarkers capture overlapping biological processes and lack validated thresholds to define biological aging, especially in women. Future research requires large, longitudinal studies across diverse populations to establish clinically meaningful thresholds and sex-specific calibration. Advancing precision health strategies for women requires a better understanding of how reproductive and hormonal factors modify biomarker trajectories to improve risk prediction and to facilitate the development of targeted interventions for age-related diseases.

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Lifespan exposure to hormone therapies and structural brain morphometry in older women

Robyn A Honea 1, Amber Watts 2, Shannon D Donofry 3, Cristina Molina-Hidalgo, Hayley S Ripperger, Sarah L, et al. **Background:** Although many studies support a neuroprotective role for estrogens and other ovarian hormones in women, findings across imaging studies remain mixed. Few studies have explored both early- and midlife- hormone exposures simultaneously or incorporated whole-brain, voxel-wise approaches. This study examined the effects of early- and midlife exposure to ovarian hormones- via hormonal birth control (BC), menopausal hormone therapy (MHT)- and their timing on brain health in older women. We also studied the relationship of age of menopause (i.e., greater endogenous exposure to ovarian hormones) to brain health in older adulthood. **Methods:** We analyzed baseline data from 459 women (ages 65-80) in the multi-site IGNITE study, a 12-month randomized aerobic exercise study. We examined retrospective self-report

of BC and MHT use in relation to structural MRI metrics using voxel-based morphometry (VBM) for gray matter volume and surface-based morphometry (SBM) for cortical thickness. Findings: BC use compared to no BC use was associated with greater gray matter volume in temporal, occipital, and frontal regions in older adulthood. Longer BC duration was linked to larger fusiform gyrus volume. Combined BC and MHT use compared to no use was associated with greater volume in parietal and temporal areas and thicker cortex in the posterior cingulate and temporal gyri. Later menopause onset correlated with greater posterior cortical thickness. No associations were found for MHT timing or BC start age. Interpretations: Both endogenous and exogenous lifetime exposure to ovarian hormones were associated with structural brain measures generally consistent with preserved brain aging. These findings highlight the importance of exposure timing in women's brain health and AD risk prevention.