

Menopause

Current Awareness Bulletin

September 2025

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Are you looking for a bite-size bulletin that focuses on the staff experience of menopause and its symptoms?

Contact Helen Clemow at Salisbury NHS Foundation Trust to receive a blend of news and information based on topics discussed at their *Menopause Tea and Talk* sessions: helen.clemow@nhs.net

Guidelines

1. BMS Tool for Clinicians: Managing sleep disturbance during the menopause transition

Authors: British Menopause Society

Publication Date: 2025

Abstract: Sufficient quality and quantity of sleep is important for optimal health, but 40-56% of menopausal women report difficulty sleeping and it is one of the most common symptoms of the menopause transition.

Sleep symptoms are associated with an increase in severity of other menopause related symptoms and reduced quality of life, as well as an increase in prevalence of affective disorders, cognitive dysfunction, migraine, sexual dysfunction and an increased risk of cardiovascular disease. Optimising sleep should be seen as a priority in menopausal women.

There is a lack of clear guidance for clinicians in the management of sleep symptoms; the causes are often multifactorial, and the treatment may involve multiple different pathways. This BMS Tool for Clinicians brings together evidence supporting the diagnosis and management of sleep symptoms in menopause, as well as sleep specific guidelines, to provide both a detailed review and practical guidance.

2. Endometriosis and menopausal health: An EMAS clinical guide.

Authors: Erel C.T.;Nigledis M.P.;Ozcivit Erkan I.B.;Goulis D.G.;Chedraui P.;Giannini A.;Kiesel L.;Phillips N.;Simoncini T.;Armeni E.;Boban J.;Ceausu I.;Hillard T.;Lambrinoudaki I.;Smetnik A.;Goldstajn M.S.;Stute P.;van Dijken D. and Rees, M.

Publication Date: 2025

Journal: Maturitas 202(pagination), pp. Article Number: 108715. Date of Publication:

November 2025

Abstract: Introduction: Endometriosis is a common gynecological condition, and problems may persist or develop after the menopause. Endometriosis or its treatment in premenopausal women may lead to premature or early menopause. Thus, it is imperative that healthcare providers are appropriately trained in management of endometriosis at the menopause and beyond.

Aim(s): To provide an evidence-based clinical guide for the assessment and management of menopausal health in women with a history of endometriosis.

Material(s) and Method(s): Review of the literature and consensus of expert opinion. Summary recommendations: Surgery is the preferred option for managing symptomatic endometriosis after the menopause, as it should reduce pain, ensure an accurate diagnosis, and decrease risk of malignancy. Women with endometriosis may experience a spontaneous early menopause or surgically induced menopause. Endometriosis is also associated with an increased risk of cardiovascular disease, ovarian, breast, and thyroid cancers, as well as osteoporosis. Menopausal hormone therapy (MHT) is indicated for managing vasomotor and genitourinary symptoms and maintaining bone health. Continuous combined MHT may be safer than other forms in both hysterectomized and non-hysterectomized women with endometriosis as the risk of recurrence and malignant transformation of residual endometriosis may be reduced. Estrogen-only MHT should be avoided, even for women who have had a hysterectomy. For women not using MHT, alternative pharmacological treatments, such as neurokinin-3 receptor antagonists, should be considered for managing vasomotor symptoms. Additionally, antiresorptive and anabolic therapies, along with calcium and vitamin D supplementation, should be provided as indicated to ensure skeletal protection. If endometriosis recurs during MHT use and the patient is symptomatic, several management strategies may be employed: altering the regimen, discontinuation, and use of non-hormonal strategies. Herbal preparations should be avoided as their efficacy is uncertain and some may contain estrogenic compounds.

Research

1. A Meta-Ethnography of Women's Intimate and Sexual Experiences Across the Menopause Continuum.

Authors: Alotaibi S.; Hinchliff S. and Ali, P.

Publication Date: 2025

Journal: International Journal of Women's Health 17, pp. 2465–2491

Abstract: Women's intimate and sexual experiences during midlife are shaped by complex biopsychosocial factors, warranting focused attention in research and clinical practice. A hormonal shift in the menopause transition period may cause symptoms such as vaginal dryness, thinned mucosa, and painful intercourse. Other symptoms include decreased libido. and difficulty achieving orgasm during sexual activity. With more women reaching midlife, there is more need to understand how physiology and psychology impact their intimate relationships and overall health. The purpose of this review was to explore published qualitative studies on women's sexual experiences including function, satisfaction, and challenges during midlife and the menopause continuum. A meta-ethnographic approach was conducted to synthesize all relevant qualitative studies. We searched on the Web of Science, Scopus, and CINAHL for studies published between 2010 and September 2024. Of 1,361 studies identified, 53 studies encompassing diverse cultural contexts met the inclusion criteria and were synthesized. Three main themes were identified: physical symptoms and cultural influences on sexuality during menopause and midlife; emotional, psychological, and relational responses to sexual and bodily changes, including shifts in self-perception, body image, emotional well-being, and relationship dynamics; and adapting to sexual changes during the midlife and menopause transition. The review highlights that biological changes alone are insufficient to fully understand midlife and menopausal women's sexual experiences, emphasizing the need for a biopsychosocial approach to provide holistic care. Greater attention should be given to midlife women's sexual health and well-being by raising awareness and encouraging open discussions about menopause and sexual changes. Healthcare professionals play a critical role in recognizing the psychological impacts of these changes and facilitating conversations to help women feel comfortable discussing sensitive topics. The review highlights the need for future research to explore women's experiences of menopause and sexual health and well-being across diverse cultural contexts, with particular attention to non-Western countries where such perspectives remain underrepresented. Copyright © 2025 Alotaibi et al.

2. Effects of Mindfulness-Based Intervention on Sexual Health in Menopause: A Systematic Review.

Authors: Altintas E.; Unlu Suvari G. and Oskay, U.

Publication Date: 2025

Journal: International Journal of Sexual Health (pagination), pp. Date of Publication: 2025

Abstract: Objective: Menopausal women often experience changes in sexual function, including reduced desire, arousal difficulties, and increased sexual distress, which can impact their overall well-being. Mindfulness-based interventions (MBIs) have emerged as a potential approach to enhancing sexual function and reducing distress, yet their effectiveness remains uncertain. This systematic review aimed to evaluate the effects of MBIs on sexual function, desire, arousal, sexual distress, and satisfaction in menopausal women.

Method(s): We searched Science, Scopus, and ScienceDirect for randomized controlled trials (RCTs) published up to February 2025. Studies were included if they evaluated the effects of MBIs on sexual function outcomes in menopausal women. In total, seven RCTs, involving 609 participants from the United States, Iran, India, the Netherlands, and Hong Kong, met the inclusion criteria. Intervention durations ranged from 8 to 12 weeks, with various validated measures used to assess sexual function and related outcomes. Study quality was assessed using Joanna Briggs Institute Critical Appraisal Checklists.

Result(s): Mindfulness demonstrated positive effects on sexual desire, arousal, and sexual distress in menopausal women. A significant reduction in sexual distress was consistently reported across studies. However, the effects on overall sexual function varied, with some studies showing improvements in satisfaction while others reported inconsistent findings. The heterogeneity in study design, intervention types, and outcome measures contributed to variations in reported effects.

Conclusion(s): Mindfulness appears to be beneficial in reducing sexual distress and improving aspects of sexual function in menopausal women. However, the variability in study outcomes highlights the need for further high-quality, standardized research to determine the long-term effectiveness and clinical applicability of these interventions. Given the increasing interest in nonpharmacological strategies for menopause-related health concerns, mindfulness may offer a promising complementary approach for sexual well-being in this population. Copyright © 2025 Taylor & Francis Group, LLC.

3. Sleep disorders and menopausal symptoms: a Latin American perspective on postmenopausal health.

Authors: Arteaga, Eugenio E.;Blumel, Juan E.;Vallejo, Maria S.;Salinas, Carlos;Tserotas, Konstantinos;Calle, Andres;Dextre, Maribel;Elizalde, Alejandra;Espinoza, Maria T.;Escalante, Carlos;Gomez-Tabares, Gustavo;Martinez-Garcia, Alejandra;Monterrosa-Castro, Alvaro;Nanez, Monica;Ojeda, Eliana;Rey, Claudia;Rodriguez-Vidal, Doris and Rodrigues, Marcio A.

Publication Date: Aug 13,2025

Journal: Climacteric 1-7

Abstract: OBJECTIVE: This cross-sectional, observational study, conducted in nine Latin American countries, aimed to examine the association between hot flashes and insomnia, and whether the severity of vasomotor symptoms (VMS) correlates with sleep disturbances. METHOD: The study collected sociodemographic and clinical data, and evaluated the presence of sleep disorders using Jenkin's Sleep Scale (JSS-4) and menopausal symptoms using the Menopause Rating Scale (MRS) questionnaire. RESULTS: The study included 1185 postmenopausal women with average age 56.9 ± 5.7 years, body mass index (BMI) of 26.5 ± 5.2 kg/m² and 8.6 ± 6.4 years since menopause. Overall, 20.6% reported sleep disturbances.

Compared to those without sleep problems, affected women had longer postmenopausal duration (12 ± 9.0 vs. 10.8 ± 7.8 , p < 0.03), had higher BMI (27.9 ± 5.6 vs. 26.1 ± 5.0 , p < 0.001), were more often smokers and homemakers, and had more comorbidities. They were also less likely to have a partner or have used menopausal hormone therapy. Sleep disturbances increased proportionally with VMS severity (p < 0.01). In multivariate analysis, sleep disorders were associated with VMS (odds ratio [OR] 4.47), psychotropic use (OR 1.84), obesity (OR 1.45) and comorbidities (OR 1.45). CONCLUSION: Women with VMS were more likely to experience sleep disorders and this effect was proportional to the magnitude of the hot flashes. The study also presents several factors associated with sleep disorders in postmenopausal women that should be considered to help prevent these disturbances.

4. Hyaluronic acid injection to treat symptoms of vulvovaginal atrophy and improve sexual function in postmenopausal women: A 52-week long-term follow-up.

Authors: Bensmail H.;Marchand Lamiraud F.;Martin C.;Pelckmans S.;Cha'ban F.;Siboni Frisch A.;Deniz G.;Sabban Serfati P.;Caubo B.;Gurriet B.;Petit Breuilh I.;Pastijn A.I.;Berreni N. and Cosson, M.

Publication Date: 2025

Journal: Maturitas 201(pagination), pp. Article Number: 108687. Date of Publication: October 2025

Abstract: Objectives: To evaluate the long-term efficacy and safety of a single injection session of cross-linked hyaluronic acid for postmenopausal vulvovaginal atrophy. Study design: 12-week, randomised, placebo-controlled, single-blind phase followed by 40-week open-label phase. At study start, patients received hyaluronic acid or placebo injection. At 12 weeks, patients who initially received placebo received hyaluronic acid. Main Outcome Measure(s): Mean change from baseline in the severity score of the most bothersome symptom, scores for vulvovaginal atrophy individual symptoms, score on the Female Sexual Function Index and vaginal pH after hyaluronic acid injection. Patients receiving hyaluronic acid were followed to 36 weeks or 52 weeks if treated at study start. Result(s): 115 patients receiving hyaluronic acid were analysed. The mean score for most bothersome symptom and all individual symptom scores were significantly reduced from baseline at all time points (p < 0.001). The initial decrease in most bothersome symptom was observed at 4 weeks, with a mean (SD) decrease of -1.05 (1.05) to 1.69 (1.11), and maintained up to 52 weeks. Mean full-scale score on the Female Sexual Function Index was significantly increased from baseline at all time points (p < 0.001). The initial increase was observed at 4 weeks, with a mean increase of 4.50 (6.51) to 20.54 (8.60), and maintained up to 52 weeks. Improvement was observed across all domains of the Female Sexual Function Index. There was a general trend for improvement in vaginal pH.

Conclusion(s): A single injection session of hyaluronic acid is effective in reducing vulvovaginal symptomatology and in improving sexual function for up to 52 weeks, making it a suitable management option for moderate to severe vulvovaginal atrophy symptoms. Clinical Trials.gov identifier NCT04219722

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5. Menopause and the voice: a narrative review of physiological changes, hormone therapy effects, and treatment options.

Authors: Bensoussan, Yael E.; Evangelista, Emily G.; Doctor, Rebecca J.; Mathyk, Begum A.; Bevec, Kate L.; Toghranegar, Jamie A. and Patel, Rupal

Publication Date: 2025

Journal: Menopause

Abstract: IMPORTANCE AND OBJECTIVE: Voice changes during menopause affect patients' communication and quality of life. This narrative review aims to provide a comprehensive exploration of voice changes during menopause. It presents objective and subjective/symptomatic changes as well as treatment options for this population. Lastly, it identifies areas of research and future directions needed to serve this population through collaboration between voice experts and gynecologists. **METHODS**: To inform this narrative review, a literature review was conducted using the PubMed database, encompassing publications from January 2005 to January 2025. The review synthesized research on hormonal influences, acoustic analyses, laryngeal imaging, and patient-reported outcomes, with a focus on understanding the physiological mechanisms underlying menopausal voice alterations. **RESULTS**: The review reveals a complex narrative of vocal transformation during menopause. Hormonal decline-characterized by reduced estrogen and progesterone levelsprecipitates significant laryngeal changes. Up to 46% of menopausal women experience perceptible vocal modifications, including decreased fundamental frequency (by 0.94 semitones), increased vocal instability, and reduced phonation capabilities. Particularly vulnerable are professional voice users, who face unique challenges in maintaining vocal performance. Hormone therapy demonstrates potential protective effects, though findings remain inconsistent. **DISCUSSION AND CONCLUSION**: Menopause-related voice disorders represent a nuanced and underexplored medical phenomenon. This review underscores the critical need for interdisciplinary research that integrates gynecology, otolaryngology, endocrinology, and speech pathology. Future investigations could focus on developing Aldriven voice biomarkers, conducting longitudinal studies, and creating targeted interventions that recognize the voice and respiratory transitions women experience during menopause.

6. How menopause symptoms shape experiences of the criminal legal system: A qualitative study across the United States.

Authors: Brotkin, Elana Jaffe; Patel, Shivani Paresh; Palmquist, Aunchalee; Emerson, Amanda; Hemberg, Jordana; Lorvick, Jennifer; Ramaswamy, Megha and Knittel, Andrea

Publication Date: Aug 20 ,2025

Journal: Social Science & Medicine 384, pp. 118508

Abstract: INTRODUCTION: The number of midlife individuals involved in the criminal legal system has increased significantly in recent decades. Despite this growth, little is known about the ways in which experiences of midlife, including the menopause transition, shape experiences within the criminal legal system. This study explores the intersection between

people's experiences of menopause and experiences of the criminal legal system. **METHODS**: We conducted semi-structured in-depth interviews with individuals who experienced the menopause transition while involved with the criminal legal system. In-depth notes or transcripts from each interview were analyzed using the RADaR technique for data reduction. We identified emergent themes and developed an overarching thematic framework. **RESULTS**: We conducted interviews with 29 individuals (mean age 56.9 years). Participants reported a wide range of menopause related physical, emotional, and social changes. Menopause related changes considerably shaped participants' experiences within the criminal legal system. Three distinct themes emerged to characterize how menopause impacted experiences in the criminal legal system: 1) shame and stigma; 2) loss of control; and 3) criminalization and collateral consequences. **IMPLICATIONS**: There is a growing and largely understudied population of individuals going through the menopause transition while involved in the criminal legal system. Our data suggests that the experience of going through the menopause transition compounds dehumanization and deprivation of autonomy in carceral settings.

7. Are health-related, lifestyle, work-related, and socio-demographic factors associated with work productivity among menopausal women? A systematic review.

Authors: Clevis M.G.A.;van Valkengoed I.G.M.;Oosterhuis T.;Vlug A.;Heijboer A.;Bakker A.;Broekman B.;Kelder C.L.;van Dijken D.;van Someren E.;Bruinstroop E.;Scheele F.;Rivadeneira F.;van Valkengoed I.;Broerse J.;van Lennep J.R.;Dierx J.;Nieuwenhuijsen K.;Kavousi M.;Verschuren W.M.M., et al

Publication Date: 2025

Journal: Maturitas 200(pagination), pp. Article Number: 108646. Date of Publication:

Setember 2025

Abstract: An increasing number of women of menopausal age, many of whom experience menopausal symptoms, are participating in the workforce. Understanding the factors that influence work productivity in this life stage can inform the development of targeted interventions. This systematic review explores which health-related, lifestyle, work-related, and socio-demographic factors are associated with work productivity among menopausal women. A systematic search was conducted for observational studies in PubMed. PsycINFO, and Embase up to July 2024. The risk of bias was assessed using an adapted Newcastle-Ottawa scale. The GRADE framework for prognostic research was applied to evaluate the quality of evidence. A total of 29 studies were included. Menopausal symptoms in general, as well as psychological and vasomotor symptoms, and lower sleep quality were associated with lower at-work productivity, with moderate to high quality of evidence. Additionally, there was moderate quality of evidence that better (perceived) health was associated with higher at-work productivity. Regarding absenteeism, moderate evidence was found for an association with vasomotor symptoms. Inconclusive evidence was found for socio-demographic, work-related factors and remaining health-related and lifestyle factors in relation to both at-work productivity and absenteeism. This review highlights the association of menopausal symptoms and poor sleep quality with decreased work productivity in menopausal women. The evidence for other associations was limited due to the low quality of available evidence or a lack of studies. Further research on modifiable lifestyle and work-related factors is needed to improve the work

8. Genitourinary syndrome of menopause and sexual function, partner knowledge, and the impact on coupled sexual relationships.

Authors: CostaPaiva L.; Perini M.P.; de Padua K.S. and Valadares, A. L. R.

Publication Date: 2025

Journal: Menopause 32(8), pp. 685-691

Abstract: Objectives: To assess the prevalence of genitourinary syndrome of menopause (GSM) and its association with female sexual dysfunction, the partner's knowledge, and repercussions on the couple's sexual life.

Method(s): A cross-sectional study was conducted on 266 couples (532 individuals) aged 50-70 years. Women and their partners were selected utilizing the "snowball" technique, formed from the "ego" couples who answered the interview regarding general health, genitourinary symptoms, sexual function, and partner knowledge information via telephone by trained interviewers.

Result(s): The prevalence rate of GSM was 74.44%. Low sexual function was significantly more frequent in women (46.15%) than in their partners (15.77%) (P < 0.001). Vaginal dryness present in 44.15% and dyspareunia (58.67%) were associated with female sexual dysfunction (P < 0.01), decreased satisfaction with sex, and avoidance of sex for fear of pain or lack of desire. Urinary incontinence, nocturia, and urgency were reported by 17.29%, 35.34%, and 24.81% of women, respectively. and were not associated with sexual dysfunction.

Approximately 49% of partners knew about their partner's GSM symptoms. Vaginal discomfort led to the loss of men's desire, and women avoided intercourse because they were concerned about pain.

Conclusion(s): The prevalence of GSM is high and related to low female sexual function. Half of the partners knew about problems with GSM, and the women's symptoms interfered with the couple's sexual desire and satisfaction, which could impact the affective and sexual aspects of the couple's relationship.

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9. Nutrition information and the menopause: An online survey of perimenopausal and menopausal women.

Authors: Davies E. and Halliday, V.

Publication Date: 2025

Journal: Post Reproductive Health 31(2 Special Issue: Nutritioand Menopause) (pp 65-72),

pp. Date of Publication: June 2025

Abstract: Objective: This study aimed to explore where perimenopausal and menopausal women get their nutrition information from, and how reliable they perceive these sources to be. Study design: This was a cross-sectional study that used an online survey to collect data about nutrition information seeking habits. The survey was generated using the Qualtrics software

and promoted via social media. The convenience sample included women over the age of 40 years living in the UK.

Main Outcome Measure(s): Quantitative data.

Result(s): Two hundred and sixty-nine responses were analysed. The majority of respondents were over the age of 50, and from a white British background. Online sources were most commonly used by women to access nutrition information, namely official websites such as the British Menopause Society (BMS) and National Health Service (NHS) websites. The majority of participants believed that these, along with research papers, were the most reliable sources. However, receiving nutrition information from healthcare professionals was most likely to cause women to change their behaviour towards nutrition. The majority of women were interested in receiving targeted menopausal nutrition information, and this would ideally be from official websites or their healthcare professionals.

Conclusion(s): Findings from this study suggest that women predominantly rely on online sources for information about nutrition, perceiving official websites as reliable sources. There is a demand among women for tailored nutritional guidance during the menopausal transition, emphasising the importance of providing accessible and targeted resources to support women's health needs during this life stage.

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10. Factors Associated With Non-Vasomotor Menopause Symptoms Experienced by 7285 Women: A UK-Wide National Survey.

Authors: Davies, Rhianna;Goyal, Ashwin;Nash, Zachary;Hillman, Sarah;Davies, Melanie;Panay, Nick;Daniels, Jane;Hillard, Tim;Grant, Bonnie;Briggs, Paula;Robinson, Lynne;Hamoda, Haitham and Jayasena, Channa N.

Publication Date: 2025

Journal: BJOG: An International Journal of Obstetrics & Gynaecology

Abstract: OBJECTIVE: To investigate the factors associated with non-vasomotor menopause symptoms among women in the UK, focusing on the perceived importance of specific symptoms and their association with demographic and treatment-related factors. DESIGN: A cross-sectional online survey. SETTING: UK-wide national survey conducted from February to March 2023. POPULATION OR SAMPLE: A total of 7285 women completed the survey. METHODS: Participants provided anonymised demographic data and rated the importance of five menopause symptoms ('low mood', 'brain fog', 'aches and pains', 'feeling tired', and 'weight gain') using a 10-point Likert scale. The full questionnaire is provided in Supporting Information. Univariable and multivariable linear regression analyses were performed to assess the association between symptom importance scores and specific characteristics, including age, HRT and non-HRT treatment, ethnicity, and geographical location. MAIN OUTCOME MEASURES: Importance scores of menopause symptoms stratified by demographic and treatment factors. RESULTS: Significant differences were identified in perceived symptom importance across age groups, geographic locations, ethnic

backgrounds, and treatment status. Brain fog was the most frequently prioritised symptom overall. Several moderate-strength associations were observed: for example, HRT use was associated with higher importance ratings for brain fog, tiredness, low mood, and aches and pains. Ethnic minority women (Asian and Black) also gave higher importance ratings to brain fog. **CONCLUSIONS**: The findings highlight the prominence of cognitive and psychological symptoms during menopause and the influence of demographic and treatment variables on symptom prioritisation. These results support the need for personalised and inclusive menopause care that addresses a wider range of symptom concerns beyond vasomotor issues. These findings have implications for public health policy and financial investment.

11. Accessing Equitable Menopause Care in the Contemporary NHS - Women's Experiences.

Authors: Eccles, Abi;Keating, Sabrina;Mann, Claire;Shah, Lisa;Dale, Jeremy;Apenteng, Patricia;Heera, Neelam;Kuypers, Nina;Tatnell, Lynn and Hillman, Sarah

Publication Date: 2025

Journal: British Journal of General Practice

Abstract: BACKGROUND: Women from lower socioeconomic status and minority ethnic backgrounds have earlier onset and more complex menopause symptoms. Hormone replacement therapy (HRT) has grown in popularity, however there are stark disparities in those who access HRT. Rates of use in deprived areas and for Black and Asian women are significantly lower than that of white women and those in more affluent areas. AIM: To gain deeper understanding of factors shaping approaches to managing menopause and HRT prescribing patterns. **DESIGN AND SETTING**: A qualitative study with women recruited from general practice and community networks. **METHOD**: To explore women's experiences of menopause and accessing primary care as well as how perceptions and approaches may be shaped by cultural norms, we conducted in-depth semi-structured interviews and focus groups with women experiencing menopause (n = 40). Purposive sampling allowed a breadth of experiences and thematic analysis was conducted. **RESULTS**: We developed three themes in relation to women's experiences of accessing menopause care: * 'Contemporary contexts' shaped women's experiences, managing menopause alongside high workloads and caring responsibilities posed challenges perceived as distinct from previous generations. There was heightened awareness/reduced stigma and mixed views on HRT. * 'How menopause care is experienced' we demonstrate how consultations about menopause were emotionally charged, many felt they would have to advocate for HRT (if they wanted it) and some felt frustrated with the lack of options available. * 'Cultural and economic background influences on menopause help seeking' included how some women from Black or Asian backgrounds did not discuss menopause within their communities. Mistrust of medical institutions/treatments and lack of representation was problematic for nonwhite participants. Some women worried about stereotyping during consultations. **CONCLUSION**: The findings demonstrate how menopause may be particularly disruptive to modern women. We demonstrate how women are often dissatisfied with the options available and highlighted key areas, such as communication about HRT benefits/risks, which could be improved in primary care settings.

12. Long-term effects of 4 years of menopausal hormone therapy on white matter integrity.

Authors: Faubion, Laura L.;Mak, Elijah;Kara, Firat;Tosakulwong, Nirobul;Lesnick, Timothy G.;Fought, Angela J.;Reid, Robert I.;Schwarz, Christopher G.;Kendall-Thomas, June;Kapoor, Ekta;Fields, Julie A.;Bailey, Kent R.;James, Taryn T.;Lobo, Rogerio A.;Manson, JoAnn E.;Pal, Lubna;Hammers, Dustin B.;Brinton, Eliot A.;Malek-Ahmadi, Michael;Cedars, Marcelle, et al

Publication Date: 2025

Journal: Menopause

Abstract: OBJECTIVES: To assess the long-term effects of 4 years of menopausal hormone therapy (mHT) on the brain's white matter architecture in women who initiated mHT within 3 years of menopause onset. **METHODS**: The Kronos Early Estrogen Prevention Study (KEEPS) was a multicenter, double-blind, randomized, placebo-controlled 4-year mHT trial with treatment arms of oral conjugated equine estrogens (oCEE), transdermal 17beta-estradiol (tE2), and placebo in recently postmenopausal women. KEEPS Continuation was an observational follow-up of KEEPS participants. White matter integrity was evaluated in KEEPS Continuation participants 10 years after KEEPS completion using white matter hyperintensity volume, diffusion magnetic resonance imaging (dMRI) techniques, and cerebral infarcts. Linear regression models were fitted for each brain region to evaluate if there were differences in white matter between KEEPS treatment arms. RESULTS: There was no evidence to suggest the long-term effects of 4 years of mHT on brain white matter in KEEPS Continuation participants [n=266, mean age 67 (58-73)]. No differences in dMRI metrics were found in each of the treatment arms (oCEE n=70; tE2 n=79) when compared to placebo (n=94), following a false discovery rate adjustment for multiple comparisons. There were no statistically significant differences in white matter hyperintensity volume or infarct occurrence when comparing each of the treatment arms to placebo. **CONCLUSIONS**: We found no evidence of the long-term effect of 4-year mHT on white matter integrity when compared to placebo, consistent with emerging evidence of the safety of short-term use of mHT in recently postmenopausal women.

13. Reproductive milestones, use of menopausal hormone therapy, and risk of hearing loss: A life course study of 214 327 women.

Authors: Fu C.; Wang Q.; Hao W.; Virani S.S.; Barth C. and Zhu, D.

Publication Date: 2025

Journal: Maturitas 201(pagination), pp. Article Number: 108685. Date of Publication: October

2025

Abstract: Objectives: The associations between female reproductive milestones, use of menopausal hormone therapy (MHT), and the risk of hearing loss remain unclear. This study explored these associations and the potential mediating pathways.

Method(s): This longitudinal study used data from the UK Biobank. The sample comprised 214,327 women aged 40-69 years without hearing loss at baseline and without diagnosis of the condition in the first five years of follow-up. Adjusted Cox proportional hazard models were

used, along with sensitivity analyses, assessments of dose-response relationships, and joint effect analyses. The mediating roles of cardiovascular disease (CVD) and diabetes were also investigated.

Result(s): Over a mean follow-up of 13.42 years, 5106 women developed hearing loss. Higher parity (>=4 children; HR 1.29, 95 % CI 1.14-1.46), premature menopause (=45 years; 1.16, 1.01-1.32) reproductive lifespans were associated with an increased risk of hearing loss. Surgical menopause (2.71, 2.39-3.07) and natural menopause (2.49, 2.25-2.75) showed higher risk compared with pre-menopause. MHT use was associated with increased risk of hearing loss in women with typical-age natural menopause, but not in those with premature or late menopause (although point estimates were above 1 the 95 % CI included 1). CVD mediated 46.07 % of the association between parity and hearing loss, and 19.61 % of the association between early menopause and hearing loss.

Conclusion(s): Reproductive factors (such as parity and age at menopause) may influence the risk of hearing loss in women. These findings suggest that reproductive history should be incorporated into hearing health assessments, and integrated health strategies addressing both reproductive and metabolic health may help mitigate the risk of hearing loss in women. Copyright © 2025 Elsevier B.V.

14. Interacting and joint effects of type of menopause and age at menopause on the likelihood of frailty and the mediating role of age at menopause in older women: A population-based analysis from NHANES 1999-2018.

Authors: Guo H.; Ye Y.; Liu Z.; Gao Y.; Liu G.; Zhao J.; Yang Y. and He, Q.

Publication Date: 2025

Journal: Maturitas 200(pagination), pp. Article Number: 108680. Date of Publication:

Setember 2025

Abstract: Objectives: This study investigates the associations between surgical menopause, age at menopause, and frailty in older women. Furthermore, we examine whether age at menopause mediates the potential association between surgical menopause and frailty, and the extent of interaction or joint effects of surgical menopause and age at menopause on frailty.

Method(s): The analysis included 7462 women aged >=60 from the National Health and Nutrition Examination Survey 1999-2018. Frailty was measured using a 49-item frailty index and was diagnosed if the score on that index exceeded 0.21. Menopausal data were collected using a standardized reproductive health questionnaire. Survey-weighted logistic regression models were used to assess the association between surgical menopause, menopausal age, and frailty. We also conducted mediation analyses and interaction analyses on both the multiplicative and additive scales.

Result(s): Of the 7462 women, 2687 (32.4 %) had frailty. Women with a history of surgical menopause had an odds ratio (OR) of 1.44 (95 % CI: 1.25-1.66) for frailty compared to those with natural menopause. Age at menopause mediated 26.4 % of the total association between surgical menopause and frailty. No significant multiplicative or additive interactions were observed in the effects of type of menopause and age at menopause on frailty (Additive: Relative excess risk due to interaction = -0.01, 95 % CI: -0.32-0.31; Multiplicative, OR = 0.94, 95 % CI: 0.75-1.19). Joint ORs for individuals with both surgical and early menopause,

compared with those with natural menopause and without early menopause, were 1.59 (95 % CI: 1.40-1.81) for frailty.

Conclusion(s): In postmenopausal women, surgical menopause was significantly associated with a higher likelihood of frailty than natural menopause. Age at menopause mediated more than 26 % of this association.

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15. 'Simply do it.': Results from an online questionnaire to inform a community-based menopause education and support programme in the UK, InTune.

Authors: Harper, Joyce Catherine; Keay, Nicky; Mir, Mehab; Mukherjee, Annice; Plumb, Jane; Kumar, Geeta; Lindsay, Janet; Barratt, Jeremy; Strachan, Sophie and Tariq, Shema

Publication Date: Sep 09 ,2025

Journal: Post Reproductive Health 20533691251372818

Abstract: Objective We are developing a menopause education and support programme, 'InTune', using co-design that includes focus groups and workshops. We have identified the need for two key interventions: one aimed at raising general awareness, Be Prepared for *Menopause*, and another to support those currently experiencing menopause symptoms. This survey aims to reach a broader audience to better understand their needs and preferences around menopause education and support. The insights gained will help us further develop the InTune programme. Study designAn anonymous, online cross-sectional guestionnaire was developed with key stakeholders, covering demographic characteristics, menopause preparedness, and opinions and recommendations for programme design. The survey was conducted online using Qualtrics between 16/1/24 and 22/3/24. Main outcome measures Of 1596 respondents (98.4% female; 75.6% White British; median age 50 years; 79.5% peri/postmenopausal), 77.4% reported being somewhat informed or not informed about menopause. Over 90% agreed that a national menopause education and support programme was needed, delivered in-person and/or online, in weekly hour-long sessions, over 2-4 weeks. Key to acceptability and success is that information is accessible, accurate, and based on 'latest scientific evidence and debunk[s] some of the myths'. Respondents emphasised the importance of developing a programme that was accessible to all, regardless of gender, ethnicity, age, sexuality, disability status, neurodivergence and age at/cause of menopause. Conclusion Over 90% of participants agreed that a menopause education and support programme with standardised and evidence-based content was needed. This data will allow us to refine the InTune programme.

16. Prevalence and severity of symptoms across the menopause transition: cross-sectional findings from the Australian Women's Midlife Years (AMY) Study.

Authors: Islam R.M.; Bond M.; Ghalebeigi A.; Wang Y.; WalkerBone K. and Davis, S. R.

Publication Date: 2025

Journal: The Lancet Diabetes and Endocrinology 13(9), pp. 765–776

Abstract: Background: The premenopause-to-perimenopause transition is defined by the Stages of Reproductive Aging Workshop +10 (STRAW+10) criteria according to changed menstrual cycle frequency. However, this approach is unhelpful for women and gender-diverse people with oligomenorrhoea or amenorrhoea, and also because a range of diverse symptoms have been ascribed to menopause. We investigated the prevalence and severity of symptoms from the late reproductive stage to late postmenopause, identifying those which might best differentiate menopause onset.

Method(s): The Australian Women's Midlife Years (AMY) Study was a nationally representative cross-sectional study of women aged 40-69 years who were recruited via a non-probability panel using online and offline sources between Oct 27, 2023, and March 19, 2024. To be eligible, participants needed to be able to complete a questionnaire in English. Menopausal symptoms were assessed using the Menopause-specific Quality of Life (MENQOL) questionnaire. Symptom prevalence and severity over the previous 4 weeks was calculated with 95% CIs, with prevalence ratios adjusted for age, BMI, and other demographic variables. Finding(s): 8096 women were recruited: 5509 women were classified using STRAW+10 as premenopausal (n=1250), early perimenopausal (n=344), late perimenopausal (n=271), and postmenopausal (n=3644). Among moderately-to-severely bothersome symptoms, hot flushes showed the greatest change in prevalence from premenopause (8.8% [95% CI 7.2-10.4]) to late perimenopause (37.3% [31.5-43.0]; adjusted prevalence ratio 4.74 [95% CI 3.64-6.19]). Less variation was apparent for other symptoms, including poor memory and low mood. Vaginal dryness was the most discriminative sexual symptom from premenopause to late perimenopause (adjusted prevalence ratio 2.54 [95% CI 1.78-3.61]). Women with vasomotor symptoms and changed menstrual flow had more prevalent moderately-to-severely bothersome symptoms compared with women without vasomotor symptoms. Compared with premenopausal women with vasomotor symptoms and changed menstrual flow, early perimenopausal women with vasomotor symptoms reported a higher prevalence of poor memory (adjusted prevalence ratio 1.36 [95% CI 1.06-1.75]).

Interpretation(s): Our findings suggest that moderately-to-severely bothersome vasomotor symptoms can reliably indicate the onset of perimenopause in women with oligomenorrhoea or amenorrhoea. Although other symptoms might be caused or exacerbated by menopause, other factors contributing to their occurrence need to be considered and included in management and care. Additionally, treatment options and care pathways are crucial to improve wellbeing during the perimenopause.

Funding(s): National Health and Medical Research Council. Translations: For the Chinese and Spanish translations of the abstract see Supplementary Materials section. Copyright © 2025 Elsevier Ltd

17. Perimenopausal symptoms in women with and without ADHD: A population-based cohort study.

Authors: Jakobsdottir Smari, Unnur;Valdimarsdottir, Unnur Anna;Wynchank, Dora;de Jong, Maxime;Aspelund, Thor;Hauksdottir, Arna;Thordardottir, Edda Bjork;Tomasson, Gunnar;Jakobsdottir, Johanna;Lu, Donghao;Nevriana, Alicia;Larsson, Henrik;Kooij, Sandra and Zoega, Helga

Publication Date: Sep 04,2025

Journal: European Psychiatry: The Journal of the Association of European Psychiatrists 1-25

18. Exploring symptom clusters across the menopausal stages - systematic review and meta-analysis.

Authors: Khalaf A.; Mathew R. and Nayak, S. G.

Publication Date: 2025

Journal: Sexual and Reproductive Healthcare 45(pagination), pp. Article Number: 101137.

Date of Publication: Setember 2025

Abstract: This study aimed to identify and compare symptom clusters and their severity among perimenopausal and postmenopausal women using a systematic literature review on publications from 1996 to 2023 across PubMed, Medline, Cochrane Library, and APA PsvcINFO. The meta-analysis followed the PRISMA guideline, initially screening 425 articles, with 14 articles meeting the criteria of relevance, scientific rigor, and a focus on symptom clustering in climacteric women. Data from the 14 selected studies (n = 14,760) were extracted, including study characteristics, participant demographics, methods for identifying symptom clusters, specific symptoms within each cluster, and associations with lifestyle factors, genetics, or psychosocial elements. The findings were synthesized to quantify relationships between different symptom clusters, identifying four distinct groups: somatic, vasomotor, psychological, and sexual symptoms. The overall standardized mean difference (SMD) of -0.89 [95 % CI = -1.70, -0.07] was found for somatic symptom clusters, indicating significant differences. However, no conclusive distinctions were observed in vasomotor, sexual, and psychological symptoms, highlighting variability in symptom presentation. Despite this heterogeneity, the overall effect for somatic symptoms remained statistically significant (Z = 2.14, P = 0.03). The findings emphasize the complexity of symptomatology in climacteric women and underscore the need for tailored person-centered interventions and longitudinal studies.

19. As the planet warms, women pay the price: the climate change and reproductive health crisis.

Authors: Kilavuz M.; Agrali C. and Kanbay, Y.

Publication Date: 2025

Journal: Journal of the Egyptian Public Health Association 100(1) (pagination), pp. Article

Number: 14. Date of Publication: December 2025

Abstract: Climate change has emerged as a global environmental issue exacerbated by human activities. Specifically, greenhouse gas emissions and land-use changes have contributed to rising global surface temperatures and shifting weather patterns. These changes disrupt environmental and ecosystem balance, directly impacting human health. Worldwide, 3.6 billion people live in regions vulnerable to climate change, and it is projected that between 2030 and 2050, an additional 250,000 deaths annually will occur due to climate change-induced malnutrition, malaria, and diarrheal diseases. The health impacts of climate change vary between genders depending on biological, geographical, and socioeconomic factors, with women experiencing more severe negative effects. Reproductive health is significantly

affected by rising temperatures, air pollution, extreme weather events, and changing meteorological conditions. Adverse reproductive outcomes (e.g., low birth weight, preterm birth, and congenital anomalies) are more frequently observed in women. Furthermore, climate change exacerbates hot flashes, increases the risk of cardiovascular diseases, and intensifies mental health disorders in postmenopausal women. Climate change has emerged as a global environmental issue exacerbated by human activities. Specifically, greenhouse gas emissions and land-use changes have contributed to rising global surface temperatures and shifting weather patterns. These changes disrupt environmental and ecosystem balance, directly impacting human health. Worldwide, 3.6 billion people live in regions vulnerable to climate change, and it is projected that between 2030 and 2050, an additional 250,000 deaths annually will occur due to climate change-induced malnutrition, malaria, and diarrheal diseases. The health impacts of climate change vary between genders depending on biological, geographical, and socioeconomic factors, with women experiencing more severe negative effects. Reproductive health is significantly affected by rising temperatures, air pollution, extreme weather events, and changing meteorological conditions. Adverse reproductive outcomes (e.g., low birth weight, preterm birth, and congenital anomalies) are more frequently observed in women. Furthermore, climate change exacerbates hot flashes, increases the risk of cardiovascular diseases, and intensifies mental health disorders in postmenopausal women. However, current literature remains limited in addressing the specific effects of climate change on women's health in low- and middle-income countries, as well as its influence during the menopausal period. Further research is needed to explore the intersection of climate change and socioeconomic disparities, particularly in vulnerable populations. Large-scale longitudinal studies focusing on region-specific risks and health outcomes are essential to develop targeted interventions and policies. Copyright © The Author(s) 2025.

20. MenoScale: A novel digital tool to measure menopause symptoms and subjective quality of life - validation, preliminary insights on the menopausal experience and association with diet quality.

Authors: Kim C.;Marples L.;Platts A.;Bermingham K.M.;Amati F.;Hamoda H.;Pounis G.;Wolf J.;Spector T.D.;Hall W.L. and Berry, S. E.

Publication Date: 2025

Journal: Post Reproductive Health 31(2 Special Issue: Nutritioand Menopause) (pp 73-86), pp. Date of Publication: June 2025

Abstract: Background: Menopause symptoms significantly impact women's quality of life, yet existing assessment tools may not fully capture the menopausal experience. The MenoScale is a new digital tool for reporting the number and impact of menopause-associated symptoms. Objective(s): To evaluate the reliability and validity of the MenoScale, and explore its application as a research tool. Study design: Development of novel MenoScale tool and an online validation study comparing it to the Greene Climacteric Scale (GCS) and RAND 36-item Health Survey 1.0, with 1010 peri- and postmenopausal women aged 37-70 years. Main Outcome Measure(s): Construct validity, internal consistency, test-retest reliability, and associations with quality of life and dietary intake.

Result(s): The MenoScale showed good agreement between the MenoScale and GCS through

Bland-Altman plot analysis. Internal consistency varied across four symptom domains: vasomotor, sexual, psychological and cognitive, and somatic (Cronbach's alpha = 0.5-0.8). Structural equation modelling revealed psychological and cognitive symptoms as central to the menopausal experience. Higher Healthy Eating Index scores were associated with slightly lower MenoScale scores (beta = -0.132, p < .001). In the first 12 weeks post-launch, 65,181 women from 140 countries completed the online MenoScale.

Conclusion(s): The MenoScale is a valid and reliable tool for assessing menopause symptoms, offering a comprehensive assessment of the menopausal experience. The association between diet quality and symptom burden warrants further investigation. The rapid uptake of the online MenoScale demonstrates its potential for large-scale data collection and empowering individuals in managing their menopausal experience.

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21. The Effects of 8-Week Creatine Hydrochloride and Creatine Ethyl Ester Supplementation on Cognition, Clinical Outcomes, and Brain Creatine Levels in Perimenopausal and Menopausal Women (CONCRET-MENOPA): A Randomized Controlled Trial.

Authors: Korovljev, Darinka;Ostojic, Jelena;Panic, Jovana;Ranisavljev, Marijana;Todorovic, Nikola;Nedeljkovic, David;Kuzmanovic, Jovan;Vranes, Milan;Stajer, Valdemar and Ostojic, Sergej M.

Publication Date: Aug 25 ,2025

Journal: Journal of the American Nutrition Association 1-12

Abstract: OBJECTIVE: To investigate the effects of an 8-week supplementation with varying doses of creatine hydrochloride, administered alone or in combination with creatine ethyl ester, on cognitive function, clinical outcomes, brain creatine concentrations, and biochemical markers in perimenopausal and postmenopausal women. This study specifically aimed to evaluate the potential of low-dose creatine formulations with enhanced solubility as a targeted intervention for menopause-related neurocognitive and metabolic changes. METHODS: A total of 36 apparently healthy perimenopausal and menopausal women (mean age 50.1 +/- 5.7 years) were randomly allocated to one of four groups: low-dose creatine hydrochloride (750 mg/day), medium-dose creatine hydrochloride (1,500 mg/day), creatine hydrochloride plus creatine ethyl ester (800 mg/day), or placebo, in this randomized controlled double-blind trial. Menopausal women were defined as having no menstrual cycle for 12 consecutive months without other causes, while perimenopausal women were still menstruating but reported at least one symptom such as hot flashes, sleep disturbances, mood swings, or concentration difficulties. RESULTS: Supplementation with medium-dose creatine hydrochloride was found to be superior to placebo in enhancing reaction time (1.2 vs. 6.6%; p p p = 0.06). All interventions were well tolerated, with no severe adverse effects reported. **CONCLUSION**: Our findings suggest that this supplementation protocol may be a promising, safe, effective, and practical dietary strategy for improving clinical outcomes and elevating brain creatine concentrations in perimenopausal and menopausal women. The trial was registered at ClinicalTrials.gov (NCT06660004).

22. Vaginal estrogen therapy for treatment of menopausal genitourinary syndrome among breast cancer survivors: a systematic review and meta-analysis.

Authors: Lima Santos G.M.; Magalhaes A.O.; Teichmann P.D.V. and Osorio Wender, M. C.

Publication Date: 2025

Journal: Revista Brasileira De Ginecologia E Obstetricia 47(pagination), pp. Article Number: e–rbgo46. Date of Publication: 2025

Abstract: Objective: Assess survival outcomes and risk of recurrence in vaginal estrogen therapy (VET) users with medical history of breast cancer. Data source: The search strategy was guided by standardized terms and keywords were identified from controlled vocabularies. Following databases were used for literature search: Pubmed, EMBASE, Cochrane, Scopus and Web of Science. Only studies published in the 21st century (2001-present) and written in English were included. Study selection: A total of 988 records were reviewed by two independent authors. After full-text analysis of 38 of them, 7 articles were included in the meta-analysis. Data collection: Data from eligible studies were extracted and tabulated based on predefined criteria: author, country, year, study type, sample size, type of intervention, use of aromatase inhibitors, duration of follow-up, and main outcomes.

Result(s): 118.659 breast cancer survivors were analyzed, of whom 6.358 were treated with VET. The overall analysis showed no significant increase in the risk of recurrence (RR = 0.87, 95%CI: 0.67-1.11). VET users had a significant reduction in all-cause mortality (RR = 0.80, IC95%: 0.75-0.86).

Conclusion(s): Vaginal estrogen therapy appears to be safe in the management of menopausal genitourinary syndrome in breast cancer survivors and it is related to significantly lower all-cause mortality.

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23. Differential symptom relief profiles of menopausal therapies: an online survey study.

Authors: MartinKey N.A.; Funnell E.L.; Tomasik J. and Bahn, S.

Publication Date: 2025

Journal: BMC Women's Health 25(1) (pagination), pp. Article Number: 384. Date of

Publication: December 2025

Abstract: Background: While there exist safe hormonal and non-hormonal therapeutic interventions for the menopause, their efficacy profiles are not fully characterized. This study sought to use a symptom checklist to examine menopausal symptom relief associated with different treatments.

Method(s): An online survey study was conducted between December 2023 and February 2024. Convenience sampling was conducted, with participants recruited via social media, email, through relevant foundations and support groups, and by word-of-mouth. Inclusion criteria were: (1) >= 18 years, (2) assigned female at birth, (3) strong comprehension of the

English language, and (4) must be currently experiencing symptoms of the menopause or menopause transition. 3330 respondents consented to participate in the study and of these, 91.95% (N = 3062) who had completed at least 88% of the survey were included in the analysis. Symptom relief per treatment (transdermal hormone replacement therapy (HRT), oral HRT, vaginal HRT, antidepressants, testosterone, cognitive behavioral therapy (CBT)/other therapy/counseling) was assessed using the symptoms included in the Menopause-Specific Quality of Life (MENQOL) questionnaire, which measures four symptom domains: vasomotor, psychosocial, physical, and sexual.

Result(s): Data from a total of 3062 respondents were included for analysis (mean age = 51.97, SD = 5.24). Treatment response rates differed significantly across the domains (vasomotor: F(5,2340) = 204.93, p 2 = 0.31; psychosocial: F(5,2340) = 75.12, p = 0.31; psychosocial: F(5,2340) = 75.12, p 2 = 0.14; physical: F(5,2340) = 65.46, p = 0.14; physical: F(5,2340) = 65.46, p 2 = 0.12; sexual: F(5,2340) = 89.34, p 2 = 0.16). Transdermal HRT performed better at reducing vasomotor symptoms relative to all other treatment options. Regarding psychosocial symptoms, CBT/other therapy/counseling outperformed all other treatment options. The use of transdermal HRT and testosterone was associated with greater response rates in physical symptoms relative to other treatments. Finally, vaginal HRT and testosterone were associated with significantly higher response rates in sexual symptoms in comparison to all other treatments.

Conclusion(s): The findings demonstrate differential response rates to menopausal treatments across symptom domains, underscoring the importance of a comprehensive, multidimensional approach to menopausal symptom management. Utilizing a symptom checklist can facilitate the tailoring of treatment plans for specific symptom profiles and patient needs. The outcomes of this study hold considerable implications for improving and shaping treatment guidelines for the menopause.

24. Elucidating the genetic architecture of early menopause in the Tehran cardiometabolic genetic study.

Authors: Najd-Hassan-Bonab, Leila; Motafeghi, Farzaneh; Moazzam-Jazi, Maryam; Farahmand, Maryam; Azizi, Fereidoon; Daneshpour, Maryam S. and Ramezani Tehrani, Fahimeh

Publication Date: Aug 15 ,2025

Journal: Maturitas 201, pp. 108692

Abstract: BACKGROUND: Population studies elucidating the genetic architecture of early menopause have mainly focused on European ancestries, leaving a gap in understanding of the genetic influences in non-European populations. This study seeks to identify potential genetic variants linked to early menopause in Iranian women. RESEARCH DESIGN AND METHODS: We conducted a genome-wide association study on early menopause involving a discovery group of 3421 women, comprising 3145 individuals with normal age at menopause and 276 with early menopause. Additionally, a confirmation group included 1015 women, consisting of 208 individuals with a poor ovarian reserve and 807 with normal ovarian reserve, all drawn from an Iranian cohort. We analyzed over 9 million variants using the Genome-wide Complex Trait Analysis tool, followed by thorough bioinformatics evaluations and functional annotations. RESULTS: We identified specific genetic variants associated with early

menopause, notably the rs9943588 variant of the GALNT18 gene; the variant significantly increases the risk of early menopause [OR = 1.93; p = 2.54E-8]. In our confirmatory population, this variant was associated with a 35 % increased risk of poor ovarian reserve (OR = 1.35, p < 0.0001). Furthermore, epigenomics data suggest that rs9943588 may influence a regulatory motif for the ETS transcription factor in women. **CONCLUSIONS**: The rs9943588 variant of the GALNT18 gene is associated with an elevated risk of early menopause among Iranian women. Moreover, our results show significant differences in allele frequencies between Iranian and European variants, emphasizing the advantages and challenges of large-scale trans-ethnic strategies to inform personalized approaches to women's health.

25. Characterizing the spectrum of distress symptoms in midlife women with perimenopausal depression.

Authors: Nathan, Margo D.;Bondy, Erin;Prim, Julianna;Gibson, Kathryn;Rubinow, David R.;Meltzer-Brody, Samantha;Schiff, Lauren D.;Carey, Erin T. and Schiller, Crystal Edler

Publication Date: Sep 03 ,2025

Journal: Journal of Affective Disorders 392, pp. 120219

Abstract: BACKGROUND: Perimenopausal onset depression (PO-MDD) is a common cause of distress and functional impairment, though efforts to describe its clinical symptomatology have been limited. We aimed to characterize affective and anxiety symptoms associated with PO-MDD, and to identify clinical correlates of distress, including anxiety, temperament and climacteric symptoms. **METHODS**: Baseline data from unmedicated women, ages 44-55, with PO-MDD (n = 49) and without PO-MDD (controls; n = 37) in the late-perimenopause (STRAW -1 criteria) recruited for two studies examining estrogen's effect on brain activation were included. The Structured Clinical Interview for DSM-IV-TR (SCID) was used to confirm PO-MDD diagnosis. Depression and anxiety symptoms were characterized using the Inventory of Depression and Anxiety Scale (IDAS). Clinical correlates of distress were examined using the Schedule for Non-Adaptive and Adaptive Personality (SNAP) and Greene Climacteric Scale (GCS). ANCOVAs were conducted to describe group differences, controlling for race. Pearson correlations examined associations between affective, anxiety, and menopausal symptoms. RESULTS: PO-MDD reported more severe symptoms than controls on all IDAS scales other than traumatic intrusions and appetite gain (all ps < 0.05). PO-MDD participants reported more severe irritability and anxiety on the IDAS, higher negative temperament and lower positive temperament scores on the SNAP, and higher GCS scores compared with controls. LIMITATIONS: Limited sample and homogeneity in racial and ethnic distribution. **CONCLUSIONS**: Findings show a broad range of perimenopause-onset distress symptoms beyond depressed mood, including anxiety and differences in maladaptive temperament. Correlations between IDAS composite scores and anxiety scales highlight the importance of screening for anxiety related distress in this population. CLINICALTRIALS: gov: #NCT0225517 and NCT03740009.

26. Elinzanetant for the Treatment of Vasomotor Symptoms Associated With Menopause: A Phase 3 Randomized Clinical Trial.

Authors: Panay, Nick;Joffe, Hadine;Maki, Pauline M.;Nappi, Rossella E.;Pinkerton, JoAnn V.;Simon, James A.;Soares, Claudio N.;Thurston, Rebecca C.;Francuski, Maja;Caetano, Cecilia;Genga, Kelly;Haberland, Claudia;Haseli Mashhadi, Nazanin;Laapas, Kaisa;Parke, Susanne;Seitz, Christian;Schwarz, Judith and Zuurman, Lineke

Publication Date: 2025

Journal: JAMA Internal Medicine

Abstract: Importance: There is an unmet need for long-term, safe, effective, and hormonefree treatments for menopausal symptoms, including vasomotor symptoms (VMS) and sleep disturbances. Objective: To evaluate the 52-week efficacy and safety of elinzanetant, a dual neurokinin-targeted therapy, for treating moderate to severe VMS associated with menopause. Design, Setting, and Participants: OASIS-3 was a double-blind, placebocontrolled, randomized phase 3 clinical trial that was conducted at 83 sites in North America and Europe from August 27, 2021, to February 12, 2024, and included postmenopausal women aged 40 to 65 years who were seeking treatment for moderate to severe VMS (no requirement for a minimum number of VMS events per week). The data were analyzed on March 11, 2024. Intervention: Once-daily oral elinzanetant, 120 mg, or matching placebo for 52 weeks. Main Outcomes and Measures: The primary outcome was mean change from baseline to week 12 in the frequency of daily moderate to severe VMS, which was analyzed using a mixed model with repeated measures. Secondary end points included changes over 52 weeks in measures evaluating sleep disturbance and the effect on menopause-related quality of life. Exploratory end points included mean changes over 50 weeks in frequency and severity of daily moderate to severe VMS. Exploratory and secondary end points were analyzed using descriptive statistics. Safety was also assessed. Results: Overall, 313 women (mean [SD] age, 54.6 [4.7] years; 51 [16.3%] were Black or African American, and 240 [76.7%] were White individuals; 34 [10.9%] were Hispanic or Latina) were randomized to receive elinzanetant and 315 (mean [SD] age, 54.9 [5.0] years; 44 [14.0%] Black or African American, 34 [10.8%] Hispanic or Latina, and 253 [80.3%] White individuals) to receive placebo. At week 12, the mean change from baseline in daily moderate to severe VMS frequency was -5.4 (95%) CI, -6.3 to -4.5) for elinzanetant and -3.5 (95% CI, -4.1 to -2.9) for placebo; the least-squares mean difference for elinzanetant vs placebo was -1.6 (95% CI, -2.0 to -1.1; P < .001). Although no statistical hypotheses were defined, nor was the study powered to detect between-group differences for the secondary and exploratory end points, descriptive analyses showed numerical advantages for elinzanetant vs placebo for improving VMS frequency and severity over 50 weeks and sleep disturbances and menopause-related quality of life over 52 weeks. Regarding safety, elinzanetant was not associated with hepatotoxic effects, endometrial hyperplasia, or meaningful changes in bone density or bone turnover markers. Treatmentrelated adverse events were more common with elinzanetant than placebo (30.4% vs 14.6%); the most frequent were somnolence, fatigue, and headache. Conclusions and Relevance: The OASIS-3 randomized clinical trial expanded on findings from the 26-week OASIS-1 and OASIS-2 trials, exploring the use of elinzanetant over a longer duration and in a broader population. Elinzanetant shows promise as a treatment for moderate to severe VMS. Trial Registration: ClinicalTrials.gov Identifier: NCT05030584.

27. Advent of NK3R Antagonists for the Treatment of Menopausal Hot Flushes: A Narrative Review

Authors: Patel, Aaran H.; Pierret, Aureliane; Mills, Edouard G.; Comninos, Alexander N.; Dhillo, Waljit S. and Abbara, Ali

Publication Date: 2025

Journal: BJOG: An International Journal of Obstetrics & Gynaecology

Abstract: The menopause transition is marked by symptoms predominantly attributed to declining oestrogen levels. Approximately 80% of women experience associated symptoms, and 25% experience severe symptoms. The commonest are vasomotor symptoms (VMS), collectively referring to hot flushes and/or night sweats. Menopause hormone therapy (MHT) is the most common treatment for menopause-related symptoms; however, some treatmentrelated risks mean that MHT may not be suitable for all. Furthermore, following the publication of seminal studies, perceived risks of MHT have also led to reduced uptake. Additionally, not all women receiving MHT have full resolution of their symptoms. Therefore, alternative nonhormonal therapies are of therapeutic interest. Neurokinin B (NKB) signalling via its cognate receptor, neurokinin 3 receptor (NK3R), at the hypothalamus has been identified as a mediator of menopausal VMS. Recently, NK3R antagonists have been developed targeting the NKB signalling pathway as a novel effective non-hormonal therapeutic option for menopausal VMS. Fezolinetant has received approval from drug regulatory authorities worldwide, with data from multiple clinical trials showing a marked 60%-80% reduction in the frequency and severity of daily moderate-severe VMS, including in those considered unsuitable for MHT. Very recently, elinzanetant has been approved by the MHRA in the UK for the treatment of VMS in menopause, though it has not yet been approved by the FDA in the US. This review explores the neuroendocrine changes that occur in menopause and evidence from animal and human models suggesting that increased NKB signalling is involved in the pathogenesis of menopausal VMS. Data from clinical trials identifying NK3R antagonists as novel therapeutic agents for menopausal VMS are reviewed. Finally, the current status of NK3R antagonists and future directions of study in this area are discussed.

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28. A one-stop clinic improvement project for postmenopausal bleeding in NHS Forth Valley.

Authors: Robinson A.; Wilson D. and Mahal, D.

Publication Date: 2025

Journal: BMJ Open Quality 14(3) (pagination), pp. Article Number: e003248. Date of

Publication: 26 Aug 2025

Abstract: Background Referrals for postmenopausal bleeding (PMB) were creating a pressure point within a general gynaecology outpatient clinic in NHS Forth Valley (NHSFV) in Scotland.

This project originated in concerns around delays in time from referral to diagnosis as a result of this pressure point. Aim The aim of this project was to test the efficiency of a process change which reduced waiting time from referral to diagnosis for patients with PMB. Methods Use Active Clinical Referral Triage (ACRT) and a one-stop clinic to reduce waiting lists. Quality improvement methods including data collection and process mapping were used to understand the current system. Cycles of the Plan-Do-Study-Act (PDSA) tool were applied to test the concept of introducing a one-stop clinic for PMB. Results Qualitative data gathered during the project showed that patients preferred the one-stop clinic. Limited quantitative data indicated the one-stop clinic design reduced PMB referral waiting time for patients. Conclusion Our aim was to streamline a process to reduce waiting time between referral and diagnosis for patients with PMB. This was achieved by the creation of a one-stop clinic for PMB/unscheduled bleeding on HRT (hormone replacement therapy) patients. The work to date has highlighted the efficiency of the new process and ultimately suggests the potential for a reduction in waiting times in this pathway.

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29. Menopausal Hormone Therapy and Cardiovascular Diseases in Women With Vasomotor Symptoms: A Secondary Analysis of the Women's Health Initiative Randomized Clinical Trials.

Authors: Rossouw, Jacques E.;Aragaki, Aaron K.;Manson, JoAnn E.;Szmuilowicz, Emily D.;Harrington, Laura B.;Johnson, Karen C.;Allison, Matthew;Haring, Bernhard;Saquib, Nazmus;Shadyab, Aladdin H.;Rexrode, Kathryn M.;Liu, Longjian;Mouton, Charles P. and LaCroix, Andrea Z.

Publication Date: 2025

Journal: JAMA Internal Medicine

Abstract: Importance: Identification of appropriate patients for treatment of vasomotor symptoms (VMS) with menopausal hormone therapy (HT) is challenging. **Objective**: To assess risk of cardiovascular disease (CVD) due to HT in women with VMS. Design, Setting, and Participants: In this secondary analysis of 2 randomized clinical trials of HT, postmenopausal women aged 50 to 79 years from 40 US clinical centers were included. Data were collected from November 1993 to September 2012, and data were analyzed from December 2024 to May 2025. Interventions: Conjugated equine estrogens (CEE), 0.625 mg per day, or CEE with medroxyprogesterone acetate (MPA), 2.5 mg per day, vs placebo. Main Outcomes and Measures: Atherosclerotic CVD (ASCVD; defined as composite of nonfatal myocardial infarction, hospitalization for angina, coronary revascularization, ischemic stroke, peripheral arterial disease, carotid artery disease, or CVD death). Results: Of 27 347 included postmenopausal women, the mean (SD) age was 63.4 (7.2) years; a total of 10 739 (39.3%) had a hysterectomy, and 16 608 (60.7%) had an intact uterus. The median (IQR) follow-up was 7.2 (6.4-8.1) years and 5.6 (4.8-6.5) years for those in the CEE alone trial and the CEE plus MPA trial, respectively. In the CEE alone trial, moderate or severe VMS were present at baseline in 905 (27.6%), 705 (14.7%), and 220 (8.7%) women aged 50 to 59 years, 60 to 69 years, and 70 to 79 years, respectively; in the CEE plus MPA trial, moderate or severe VMS was present in 1225 (22.4%), 649 (8.7%), and 172 (4.8%), respectively. Among women with

moderate or severe VMS at enrollment, 3382 (96.7%) recalled having symptoms near menopause onset. CEE alone reduced VMS by 41% across all age groups (overall relative risk [RR], 0.59; 95% CI, 0.53-0.66). However, in the CEE plus MPA trial, VMS reduction was attenuated with age (age 50-59 years: RR, 0.41; 95% CI, 0.35-0.48; age 60-69 years: RR, 0.72; 95% CI, 0.61-0.85; age 70-79 years: RR, 1.20; 95% CI, 0.91-1.59; interaction P for trend < .001). Both CEE alone and CEE plus MPA appeared to have neutral effects on ASCVD in women with moderate or severe VMS aged 50 to 59 years (CEE alone: hazard ratio [HR], 0.85; 95% CI, 0.53-1.35; CEE plus MPA: HR, 0.84; 95% CI, 0.44-1.57). While the estimated risk was higher for CEE alone in women with VMS aged 60 to 69 years, there was no clear signal of harm (CEE alone: HR, 1.31; 95% CI, 0.90-1.90; CEE plus MPA: HR, 0.84; 95% CI, 0.51-1.39). However, women with VMS 70 years and older had increased risks of ASCVD (CEE alone: HR, 1.95; 95% CI, 1.06-3.59; 217 excess events per 10 000 person-years; interaction P for trend = .03; CEE plus MPA: HR, 3.22; 95% CI, 1.36-7.63; 382 excess events per 10 000 person-years; interaction P for trend = .02). **Conclusions and Relevance**: In this secondary analysis of 2 randomized clinical trials, among younger postmenopausal women aged 50 to 59 years, both CEE alone and CEE plus MPA reduced VMS without significantly affecting ASCVD risk. In women with VMS 70 years and older, risks for ASCVD were increased in both trials. The findings support guideline recommendations for treatment of VMS with HT in women aged 50 to 59 years, caution if initiating HT in women aged 60 to 69 years, and avoidance of HT in women 70 years and older. Trial Registration: ClinicalTrials.gov Identifier: NCT00000611.

30. Treatment patterns in women with breast cancer and endocrine therapy-related menopausal symptoms: a cohort study from the United States, United Kingdom, and Germany.

Authors: Saadedine, Mariam;Banks, Victoria;Dinkel-Keuthage, Carina;Janssenswillen, Cecile;Lavallee, Martin;Moeller, Carsten;Schoof, Nils;Vizcaya, David;Francuski, Maja;Golozar, Asieh;Romer, Thomas and Kubba, Ali

Publication Date: 2025

Journal: Menopause

Abstract: OBJECTIVE: To describe treatment patterns for menopausal symptoms in women taking endocrine therapy for breast cancer treatment/prevention from the United States (US), United Kingdom (UK), and Germany. METHODS: We undertook a retrospective cohort study using data from the US Market Scan Commercial Claims and Encounters Data database, and electronic health records from the UK's Clinical Practice Research Database Aurum and the German Disease Analyzer. Women aged 18-65 years with a first prescription/dispensation for endocrine therapy for breast cancer treatment or prevention (index date) from 2010 to 2022 were followed up, and the following treatment classes were evaluated: antidepressants, benzodiazepines, anticonvulsants, antihypertensives, and hormone therapy. RESULTS: Treatments were recorded in 32.7% (39,137/119,717) US women, 20.4% (8,350/40,956) UK women, and 8.3% (1,031/12,388) German women. Among these, ~80% in the US and UK, and all in Germany, received one treatment class; switches occurred in 20.5% (US) and 16.5% (UK). The most frequent initial treatment classes were antidepressants (31.7% US, 45.3% UK, 38.1% Germany); the second most frequent were benzodiazepines (30.3% US),

anticonvulsants (24.3% UK), and hormone therapy (27.2% Germany). Among antidepressants, the most common were venlafaxine (US and Germany), and amitriptyline, sertraline, and citalopram (UK). Six-month continuation rates for antidepressants were 42% (US), 12% (UK), and 7% (Germany); continuation rates for other treatments were even lower. **CONCLUSIONS**: Continuation rates with available treatments for menopausal symptoms in women receiving endocrine therapy for breast cancer treatment/prevention are very low. This indicates a clear unmet need for safe, effective, and well-tolerated treatments in this patient population.

31. Age of menopause and dementia risk in 10,832 women from the Swedish Twin Registry.

Authors: Saelzler U.G.;Sundermann E.E.;Foret J.T.;Gatz M.;Karlsson I.K.;Pederson N.L. and Panizzon, M. S.

Publication Date: 2025

Journal: Alzheimer's and Dementia 21(8) (pagination), pp. Article Number: e70541. Date of Publication: August 2025

Abstract: INTRODUCTION: An earlier age of menopause (AOM) is hypothesized to increase vulnerability to the neuropathological processes of dementia, which begin in midlife. METHOD(S): We tested this hypothesis in a sample of 10,832 women from the Swedish Twin Registry, stratified by menopause etiology.

RESULT(S): Survival models showed that a U-shaped association was present for women whose menopause occurred spontaneously. Sensitivity analyses conducted in hormone naive, apolipoprotein E epsilon4+, and AOM restricted subsamples showed largely analogous patterns of results. DISCUSSION: Supporting conclusions from basic research, our results suggest that estrogens (proxied here by AOM) influence several biological pathways mediating dementia disease processes. In line with trends in hormone research across the past century, our findings challenge the oversimplified "more-is-better" perspective on hormone exposure and highlight the need for cross-disciplinary approaches to better understand the interacting endocrine and biopsychosocial factors that underlie the association between AOM and dementia pathogenesis. Highlights: We found a U-shaped association of timing of spontaneous menopause and dementia risk. We also found a negative linear association of age of induced menopause and dementia risk. Restriction to a hormone-naive sample did not alter the pattern of results. Conducted exploration of the impact of common survival model parameter choices on results.

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32. Menopausal hormone therapy shows superior efficacy to complementary and alternative medicine in treating symptomatic hand osteoarthritis in Japanese women during perimenopause.

Authors: Sasaki H.; Sakihama M.; Karakida N.; Miyazaki T.; Kobayashi H. and Taniguchi, N.

Publication Date: 2025

Journal: Women's Health 21(pagination), pp. Article Number: 17455057251359384. Date of Publication: January–December 2025

Abstract: Background: Symptomatic hand osteoarthritis frequently affects perimenopausal women and is believed to be associated with estrogen deficiency. However, effective medical therapies for symptomatic relief remain limited.

Objective(s): To compare the effectiveness of menopausal hormone therapy and complementary and alternative medicine in treating symptomatic hand osteoarthritis in perimenopausal women.

Design(s): Retrospective observational study. Data sources and methods: We retrospectively reviewed the medical records of 73perimenopausal Japanese women treated for symptomatic hand osteoarthritis at Kagoshima University Hospital between 2019 and 2022. Fifty-four patients received menopausal hormone therapy, and 19 received complementary and alternative medicine (Kampo formula and/or S-equol supplementation). No patients received additional orthopedic treatments for hand osteoarthritis, such as analgesics, splinting, rehabilitation, or injections. The outcomes included the disability of the arm, shoulder, and hand score and visual analog scale score for hand pain, which were assessed at baseline and 3months. Two-factor repeated-measures analysis of variance was used to assess conditionby-time interactions, and effect sizes were calculated. For outcomes with significant interactions, post hoc Mann-Whitney U tests were used to compare between-group changes. Result(s): Significant condition-by-time interactions were found for the disability of the arm, shoulder, and hand score (F=12.85, p=0.0007, partial eta²=0.17) and visual analog scale score (F=7.39, p=0.008, partial eta²=0.02), indicating that treatment effects differed between groups over time. Post hoc analyses revealed that the menopausal hormone therapy group showed significantly greater improvements than the complementary and alternative medicine group in both the disability of the arm, shoulder, and hand (10.85 versus -1.75points, p=0.003) and visual analog scale scores (27.9 versus 9.17mm, p=0.02). The mean improvement in disability of the arm, shoulder, and hand scores in the menopausal hormone therapy group exceeded the minimal clinically important differences, supporting both statistical and clinical significance. Conclusion(s): Compared with complementary and alternative medicine, menopausal hormone therapy showed superior efficacy in improving hand pain and dysfunction associated with symptomatic hand osteoarthritis in perimenopausal Japanese women.

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33. The Enablers and Barriers to Accessing Women's Health and Wellbeing Services for Women Aged 40-65 Years: A Qualitative Study.

Authors: Simmons K.;Hyde J.;Harmanci D.;Iwuji C.;Bremner S. and Llewellyn, C.

Publication Date: 2025

Journal: Community Health Equity Research and Policy (pagination)

Abstract: Introduction: Midlife women, aged 40-65 years, are an under-researched population

with poor and inequitable access to Women's Health and Wellbeing Services (WHWS). This study, which was supported by a Patient and Public Involvement group, explored the enablers and barriers to WHWS, with a focus on sexual health and wellbeing services, cervical and breast screening, menopause care, contraception, and incontinence services. Method(s): Semi-structured focus groups and interviews were conducted with sixty self-identifying women and gender non-binary participants aged 40-65 years living in the South-East of England. Recruitment was focused in underserved geographic areas and in underserved groups. Framework Analysis, also using the Socioecological Model, through an intersectionality lens, was used to analyse the enablers and barriers to WHWS. A feminist pragmatist approach was employed to interlink the findings into suggestions to improve access. The study was reported according to the Consolidated Criteria for Reporting Qualitative Research (COREQ).

Result(s): Three main themes emerged: the lack of prioritisation of midlife women; the widespread deficits in knowledge of the needs of midlife women; and the impact of stigma on access to care, particularly sexual health and genitourinary syndrome of menopause services. The intersectional disadvantage of belonging to underserved groups for example due to ethnicity, income, and disability, overlapped across the themes. Participants advocated for integrated, holistic, community-based, women-only services.

Conclusion(s): Further research, education, and policy investment is required to address the complex, and often highly sensitive nature of many health and wellbeing issues that face midlife women. These challenges are compounded by belonging to an underserved group. Copyright © The Author(s) 2025. This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (https://creativecommons.org/licenses/by-nc/4.0/) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access page (https://us.sagepub.com/en-us/nam/open-access-at-sage).

34. Impact of sleep disturbances on health-related quality of life in postmenopausal women: a systematic review.

Authors: Soares, Claudio N.; Bajbouj, Malek; Schoof, Nils; Kishore, Amit and Caetano, Cecilia

Publication Date: 2025

Journal: Menopause

Abstract: IMPORTANCE: Sleep disturbances are common during and after the menopause transition, with potential effects on morbidity and quality of life; however, they may be underdiagnosed and undertreated. OBJECTIVE: We carried out a systematic literature review to investigate the prevalence and impact of sleep disturbances associated with menopause on women's health-related quality of life across the stages of menopause. EVIDENCE REVIEW: Searches were conducted in PubMed and Excerpta Medica Database to identify articles published between 2013 and 2023 containing evidence for the impact of sleep quality on health-related quality of life and the epidemiology of sleep disturbances in women in menopause. FINDINGS: In total, 29 publications focusing on epidemiological outcomes of sleep disturbances and 28 studies focusing on the impact of sleep quality on health-related quality of life were identified. Overall, these studies confirmed the high prevalence of sleep disturbances in postmenopausal women. Risk factors for sleep disturbances included

menopausal status, depression, vasomotor symptoms, high glycemic index diets, and age. Notably, sleep disturbances were identified even in the absence of vasomotor symptoms. Sleep disturbances were significantly associated with impaired menopause-specific and general health-related quality of life, including depression, anxiety, and musculoskeletal pain. Sleep disturbances were also associated with reduced work productivity and the ability to perform daily activities. **CONCLUSIONS AND RELEVANCE**: Healthy sleep is important at all life stages, including during menopause. Our review indicates that sleep disturbances are highly prevalent during postmenopausal years, even among women without vasomotor symptoms, and can severely impact women's well-being and quality of life. This study highlights the importance of promoting increased awareness and developing tailored treatment strategies for sleep disturbances in midlife and beyond.

35. Menopause and work performance: A systematic review of observational studies.

Authors: Taylor S.;Callahan B.;Grant J.;Islam R.M. and Davis, S. R.

Publication Date: 2025

Journal: Menopause 32(8), pp. 769-778

Abstract: Importance: Most Australian women will experience menopause while in paid employment, and many workplaces are introducing menopause-related policies. However, the quality of the evidence for the impact of menopause on women's work outcomes is unclear. Objective(s): To systematically review the published literature that has examined the impact of menopausal status and symptoms on work ability and productivity. Evidence Review: A systematic review of English-language peer-reviewed literature. Data sources included Ovid MEDLINE, EMBASE, PsycINFO, CINAHL, and Scopus databases searched from inception to 14 November 2024, Google Scholar, and reference lists of included articles. Eligible studies included a formal process to identify menopausal status; a robust questionnaire or validated tool for assessing menopausal symptoms; a comparator group by menopausal status, symptom presence or severity; assessment of work outcomes by a validated tool; and a sample size of at least 100 women. Two authors selected the articles for inclusion and extracted the data from the included studies. The risk of bias was assessed using the modified Joanna Briggs Institute critical appraisal checklist for cohort studies and the modified Hoy tool for cross-sectional studies.

Finding(s): Of the 40 articles retrieved for full-text review, 10 met the inclusion criteria. Nine studies were cross-sectional and one was longitudinal. Menopausal status was not consistently related to work ability. The presence and severity of VMS and other menopause-related symptoms may impact work outcomes, but findings were mixed. A number of adverse employment, socioeconomic, and personal factors were independently associated with lower self-reported work ability in studies that examined such factors. Each included study was limited by a high risk of bias in at least one assessed domain, and only 6 of the studies adjusted for confounders. Heterogeneity in study design and analysis precluded a meta-analysis.

Conclusions and Relevance: Menopausal status alone was not consistently associated with work outcomes. Evidence for an adverse impact of menopausal symptoms on work ability is mixed and may be confounded by other factors impacting on women's work outcomes at midlife. Rigorously designed studies that assess the potential factors impacting work ability in

midlife women are needed to ensure robust evidence underpins menopause-related workplace policies.

36. Menopause and risk of atherosclerotic cardiovascular disease: insights from a women's UK Biobank cohort.

Authors: Vallee, Alexandre

Publication Date: Aug 20 ,2025

Journal: Maturitas 201, pp. 108693

Abstract: BACKGROUND: Menopause induces hormonal and metabolic changes that may increase the risk of atherosclerotic cardiovascular disease (ASCVD). However, the contribution of menopause to ASCVD risk, beyond aging, remains debated. This study investigated the association between menopause and ASCVD risk in a large population-based cohort. METHODS: We analyzed data from 222,007 women in the UK Biobank, excluding those with prior cardiovascular disease or uncertain menopausal status. ASCVD risk was estimated using pooled cohort equations. High ASCVD risk was defined as a 10-year risk >=7.5 %. To address missing data, multiple imputations for the Area Deprivation Index (ADI) were performed using a fully conditional specification approach. Multivariable regression models were used to assess the association between menopause and ASCVD risk, adjusting for age as well as socioeconomic, lifestyle, metabolic, and clinical factors. RESULTS: Postmenopausal women (n = 158,572) had significantly higher estimated ASCVD risk than premenopausal women (n = 63,435) (3.75 % vs. 0.81 %; p < 0.001). The prevalence of high ASCVD risk was 9.65 % in postmenopausal women versus 0.41 % in premenopausal women (p < 0.001). After full adjustment, menopause was independently associated with a higher ASCVD risk (β = 0.56 %; 95 % CI 0.54-0.58) and an 18 % increased likelihood of high ASCVD risk (OR = 1.18; 95 % CI 1.01-1.37). The association was strongest among women aged under 60 years, with no significant association observed beyond 60 years. CONCLUSION: Menopause is independently associated with increased ASCVD risk, particularly in women aged under 60 years. These findings highlight the importance of considering menopausal status in cardiovascular risk assessment and implementing targeted prevention strategies in midlife women.

37. Prospective associations of American Heart Association Life's Essential 8 with subclinical measures of vascular health, cardiovascular disease events, and all-cause mortality in women traversing menopause: The Study of Women's Health Across the Nation study.

Authors: Wang Z.;BarinasMitchell E.;Brooks M.M.;Derby C.A.;Magnani J.W.;Thurston R.C.;Ylitalo K.R.;Bertolet M. and El Khoudary, S. R.

Publication Date: 2025

Journal: Menopause 32(8), pp. 758–768

Abstract: Objectives: We aimed to characterize cardiovascular health status as measured by

Life's Essential 8 (LE8) in midlife women and to test the associations between baseline and change since baseline in LE8 with subclinical measures of vascular health, cardiovascular disease (CVD) events, and all-cause mortality.

Method(s): Baseline and follow-up LE8 metrics (diet, physical activity, nicotine exposure, sleep, body mass index, lipids, glucose, and blood pressure) were calculated as total and component scores. Changes in LE8 were calculated as differences between follow-up and baseline scores. Subclinical measures of vascular health included carotid intima-media thickness, pulse wave velocity, and carotid plaque presence. CVD events (n = 213) included myocardial infarction, stroke, heart failure, and revascularization. Deaths (n = 161) were recorded from death certificates/family reports. Linear, logistic, and Cox proportional hazards regression models were used.

Result(s): Among 2,924 midlife women (mean age: 46 +/- 3 y), 21% consistently showed ideal total LE8 scores (>= 80) across visits. Higher baseline and greater increases in total LE8 scores were associated with more favorable measures of all outcomes. Among the components, more favorable baseline/greater increases in glucose, blood pressure, and nicotine exposure scores were generally associated with lower risks for all outcomes. Sleep quality was associated with events; with more favorable baseline and/or greater increases in sleep score associated with lower risks of CVD events and/or mortality.

Conclusion(s): The prevalence of ideal total LE8 scores remained below 25% among midlife women. Glucose, blood pressure, and nicotine exposure are critical components of associated risks with lower LE8 scores. Midlife sleep quality may uniquely contribute to future event risk. Copyright © 2025 by The Menopause Society.

38. Effectiveness of nonpharmacological interventions for menopause-related insomnia: A systematic review and Bayesian network meta-analysis

Authors: Wang, Zhongli;Yang, Haoyu;Li, Shutong;Cheng, Lu;Yuan, Yuan;Bai, Ying;Su, Jianbang;Li, Yiqi;Wang, Tao and Xu, Zhenhua

Publication Date: Aug 30, 2025

Journal: Maturitas 202, pp. 108713

Abstract: BACKGROUND: Nonpharmacological therapies are widely used to improve the sleep quality of menopausal women experiencing insomnia. It is necessary to clarify which of the nonpharmacological therapies studied in randomized controlled trials are most effective and comprehensively evaluate their impacts. METHOD: We conducted a systematic search across PubMed, Embase, the Cochrane Central Register of Controlled Trials, and the Web of Science from their inception until May 25, 2025. To analyze and visualize our results, we utilized the "BUGSnet" and "JAGS" packages within the R statistical software. Employing a random-effects model, we calculated effect sizes as mean differences (MD) for continuous outcomes. Furthermore, we performed a quality assessment of our study using the RoB2 tool. RESULTS: Out of 1925 studies screened, 44 were included in the final analysis. The findings revealed that, compared with a control condition, relaxation, cognitive behavioral therapy, mindfulness, aromatherapy, acupuncture, massage, yoga and exercise all significantly improved sleep quality. The MD values ranged from -5.61 (95 % Crl: -8.70 to -2.50) for mindfulness to -2.40 (95 % Crl: -4.19 to -0.62) for exercise. Mindfulness was also the most effective based on SUCRA. CONCLUSION: Relaxation, cognitive behavioral therapy,

mindfulness, aromatherapy, acupuncture, massage, yoga and exercise all significantly improve sleep quality and mindfulness is the most effective. Copyright © 2025 Elsevier B.V. All rights reserved.

39. Lesbian, gay, bisexual, transgender and queer (LGBTQ+) menopause: Literature review, knowledge gaps and research agenda.

Authors: Westwood, S.

Publication Date: 2025

Journal: Health Environments Research and Design Journal 29(4), pp. 468–488

Abstract: There is growing interest in menopause discrimination in healthcare, the workplace and beyond. However, there is a dearth of research on lesbian, gay, bisexual, transgender and queer (LGBTQ+) experiences of the menopause. This article reports on a scoping review of the recent literature which identified a very limited number of articles and a wide range of knowledge gaps. This is discussed in relation to LGBTQ+ wider health, healthcare and workplace inequalities, and heteronormative and cisnormative conceptualisations of the menopause. A research agenda is proposed. Research should: be intersectional; differentiate between LGBTQ+ sub-groups: aim to understand how menopause experiences impact and are impacted by minority sexuality/gender identities; and examine how menopause healthcare and workplace support can be LGBTQ+ inclusive. Such research is urgently needed to ensure that LGBTQ+ people are fully included in menopause justice discussions and solutions. Copyright © The Author(s) 2024. This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (https://creativecommons.org/licenses/bync/4.0/) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (https://us.sagepub.com/en-us/nam/open-access-at-sage).

40. Barriers to Effective Treatment of Genitourinary Syndrome of Menopause: A Qualitative Study on Patient Perspectives on Vaginal Estrogen.

Authors: Zhang, Helen Y.;Andiman, Sarah E.;D'Ascanio, Antonella M.;Grimes, Cara L. and Pape, Dominique Malacarne

Publication Date: 2025

Journal: International Urogynecology Journal

Abstract: INTRODUCTION AND HYPOTHESIS: Vaginal estrogen therapy is widely accepted as a safe and effective treatment for symptoms of genitourinary syndrome of menopause (GSM), yet it is likely underutilized owing to various factors relating to patient perceptions, barriers to access, and health care system outreach. The aim of our study is to explore patient beliefs and opinions regarding its use. METHODS: A qualitative study was conducted with patients prescribed vaginal estrogen at an ambulatory urogynecology office between October 2022 and August 2023. Participants completed a symptom inventory followed by a 1:1 in-depth interview based on a structured guide designed to elicit candid insights and detailed responses

into perceptions and experiences with vaginal estrogen. Data were analyzed using grounded theory methods in a three-phase coding process to identify key themes. **RESULTS**: Twenty-two participants were interviewed. Six major themes emerged: knowledge base, barriers to health care access, motivation for symptom relief, concerns regarding side effects, physician-patient relationship, and barriers to compliance. Although participants understood the connection between GSM and aging, they often felt unclear about which symptoms vaginal estrogen targeted, how to apply it, and how it differed from systemic hormone replacement therapy. Barriers such as cost, lack of insurance coverage, and concerns about cancer were frequently reported. Physician education helped to alleviate fears, improving patient confidence in using vaginal estrogen. **CONCLUSIONS**: This study identified key beliefs and barriers affecting the use of vaginal estrogen for GSM. These findings highlight the need for improved patient education, better physician counseling, and enhanced communication to support adherence to this beneficial therapy. Copyright © 2025. The Author(s), under exclusive license to International Urogynecological Association.

In the news

Dydrogesterone 10 mg now available on the NHS HRT PPC

British Menopause Society, 10 September 2025

The British Menopause Society is pleased to note the UK availability of Dydrogesterone 10 mg as a standalone progestogen for cyclical HRT and its addition to the list of medicines covered by the HRT Prescription Prepayment Certificate (HRT PPC).

https://thebms.org.uk/2025/09/dydrogesterone-10-mg-now-available-on-the-nhs-hrt-ppc-2/

Menopause Exchange Newsletter

Issue 105 Summer 2025

- · Coming off HRT
- Insomnia at the menopause
- All about diabetes
- Skincare ingredients for the menopause

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