

Menopause

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July 2025

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Research

1. The Effect of Laughter Yoga on Vasomotor Symptoms and Sleep Quality in Menopausal Women.

Authors: AksoyCan A.;GunerEmul T.;Degirmenci F.;Buldum A.;Aksu A. and VefikulucayYilmaz, D.

Publication Date: 2025

Journal: Holistic Nursing Practice 39(4), pp. 192–200

Abstract: This experimental study aimed to determine the effects of online laughter yoga on the sleep quality and vasomotor symptoms (VMS) of menopausal women through a prospective, randomized controlled trial. About 36 women who attend the Menopause School

were randomized into either the laughter yoga (n = 18) or the control group (n = 18). The laughter yoga group participated in eight online laughter yoga sessions, with two sessions per week for four weeks, whereas the control group did not receive any intervention. Data were collected using the Descriptive Characteristics Form, Visual Analog Scale (VAS), and Pittsburgh Sleep Quality Index (PSQI). The laughter yoga group had significantly lower posttest VAS scores compared with the control group in all VMS (P .05), the intervention group exhibited a statistically significant difference in their pretest and posttest VAS and PSQI scores (P < .05; P < .001, respectively). The results indicate that laughter yoga is an effective method for reducing VMS and improving sleep quality.

2. Use of statins and risk of ovarian cancer: evidence on effect modification by parity, menopause and endometriosis from nationwide nested case-control studies.

Authors: Bouazzi, Meyya;Zheng, Guoqiao;Wang, Jiangrong;Baandrup, Louise;Hannibal, Charlotte Gerd;Hertzum-Larsen, Rasmus;Sundstrom, Karin and Kjaer, Susanne K.

Publication Date: Jun 10 ,2025

Journal: Gynecologic Oncology 198, pp. 130–136

Abstract: OBJECTIVE: Previous results on the association between statin use and risk of ovarian cancer (OC) are inconsistent, warranting further investigation. This study aims to examine the association between statin use and risk of OC in a large study population. **METHODS:** Based on two nationwide nested case-control studies utilizing data from Danish and Swedish high-quality registries, we identified 11,874 OC cases who were individually matched on age to 474,960 controls using risk-set sampling. Conditional logistic regression was performed separately on the country-specific data to calculate odds ratios (ORs) and corresponding 95 % confidence intervals (CIs) for the association between statin use and risk of OC. Country-specific estimates were combined based on a fixed-effect assumption. Furthermore, we examined potential effect modifications by a priori selected OC risk factors on the association between statin use and OC risk. **RESULTS:** We found no overall association between statin use and risk of OC (OR = 0.96; 95 % CI: 0.91-1.01); neither with duration nor intensity of use. However, statin use was associated with a decreased risk of OC in subsets of women with endometriosis (OR = 0.70; 95 % CI: 0.53-0.91), and nulliparous women (OR = 0.86; 95 % CI: 0.79-0.93). **CONCLUSION:** We found an effect modification of some known ovarian cancer risk factors on the association between statin use and risk of OC. In women with endometriosis, and in nulliparous women, respectively, statin use was associated with a decreased risk of OC, suggesting statins may have potential as a preventive measure.

3. Migraine through puberty and menopausal transition-data from the population-based Norwegian Women and Health study (NOWAC).

Authors: Bugge N.S.;Vetvik K.G.;Alstadhaug K.B. and Braaten, T.

Publication Date: 2025

Journal: Journal of Headache and Pain 26(1) (pagination), pp. Article Number: 145. Date of

Abstract: Background and purpose: Migraine considerably affects women during their reproductive years. This cross-sectional study uses data from the Norwegian Women and Health study (NOWAC) and investigates the typical age at migraine onset and cessation in women and assesses how reproductive milestones affect migraine patterns. Method(s): 4825 women with a history of migraine were included in the study. Participants completed a questionnaire that procured detailed information on their migraine characteristics and reproductive histories. Result(s): Average ages at migraine onset and cessation were 27.8 and 49.7 years, respectively. Migraine onset after age 50 was reported in 9.2% of the participants. Although 80.7% reported cessation before age 60, 46.3% continued to experience migraines postmenopause. Women with migraine with aura were more likely to report migraine onset before menarche than those with migraine without aura. Conclusion(s): Migraines usually resolve during the fifth decade of a woman's life and menstruation cessation does not necessarily equate to migraine cessation, as almost half of the women continued to experience migraines postmenopause, and one in five after 60 years. Migraine symptom persistence in a significant proportion of postmenopausal women underscores the need for continued management and research on the factors influencing migraine prevalence in later life stages.

4. Mental health consultations during the perimenopausal age range - Are GPs and patients on the same page?: A qualitative study.

Authors: Burgin, Jo;Pyne, Yvette;Davies, Anna and Kessler, David

Publication Date: 2025

Journal: British Journal of General Practice

Abstract: Background There is an increased risk of mood changes in perimenopause. There is evidence that patients and General Practitioners (GPs) may overlook this association and that there is a lack of confidence in managing such perimenopausal symptoms. Aim This study aimed to explore the experiences of clinical consultations in 1) patients in the perimenopausal age range presenting with mental health symptoms, and 2) GPs providing care to patients with mental health symptoms in the perimenopausal age range. Design & Setting A qualitative study was conducted with 18 women aged 45-55 who had consulted with their GP about a mental health symptom in the last 6 months and 11 GPs in the same area. Participants were recruited between February and August 2023. Method Data were collected through semi-structured interviews and thematic analysis was used to identify recurring patterns and key insights regarding consultation practices, patient-GP communication, and education gaps. Results Women either did not recognise, or were uncertain, as to whether perimenopause was a factor in their mental health symptoms and felt inhibited or embarrassed about raising the issue. GPs reported variable approaches to asking about perimenopausal symptoms and acknowledged gaps in their training. Time constraints and the stigma surrounding menopause further hindered consultations. Conclusion Addressing mental health symptoms during perimenopause requires a proactive and informed approach in primary care. Improved GP training on menopause, coupled with patient education to increase awareness and confidence,

could improve consultations and management of mental health symptoms in perimenopause.

5. Network analysis of depression symptoms and physical activity levels before and after menopause.

Authors: Chen S.;Wu D.;Nie K.;Tian Y.;Ma R.;Gao F. and Ma, G.

Publication Date: 2025

Journal: Plos One 20(6 June) (pagination), pp. Article Number: e0325965. Date of Publication: June 2025

Abstract: Background Previous research has established connections between pre- and postmenopause, physical activity, and depression. This study aims to delve deeper into the network structure of depressive symptoms and specific manifestations of these symptoms at different levels of physical activity during pre- and postmenopause, utilizing network analysis as a tool. Methods Our research utilized data samples from the National Health and Nutrition Examination Survey (NHANES) spanning from 2009 to 2018. We assessed depression symptoms through the Patient Health Questionnaire-9, while categorizing physical activity based on the Metabolic Equivalent of Task (MET) values recommended by NHANES and the U.S. physical activity guidelines. We conducted an analysis of the depression symptoms network across varying levels of physical activity, both pre and post-menopause, to identify core symptoms within the network using 'strength' statistics. Furthermore, we evaluated the stability of the network structure via network stability and edge weight difference tests. Results Within the network model of depressive symptoms, both pre- and post-menopause, 'Sad Mood' emerged as the most central symptom, positioning itself as the core of the network. Furthermore, there was a noticeable decrease in the correlation between depressive symptoms and a reduced stability in the network structure during periods of high physical activity compared to those of low physical activity (88.9% -> 66.7%, 80.5% -> 72.2%). Notably, no significant structural differences were observed between the pre-menopausal and post-menopausal network models, regardless of physical activity levels (PS > 0.05, PM > 0.05). Conclusion The symptom of 'Sad Mood' is pivotal in the network of depressive symptoms observed in both pre- and post-menopausal women. Engaging in high levels of physical activity may diminish the centrality of this symptom within the network, thereby weakening its association with other symptoms. Prioritizing attention to 'Sad Mood' symptoms during the pre- and post-menopausal phases could be instrumental in mitigating and forestalling the exacerbation of depressive distress.

6. Diagnostic value of the Risk of Ovarian Malignancy Algorithm (ROMA) index in the detection of ovarian cancer in postmenopausal women: a systematic review and meta-analysis.

Authors: Fathi A.;Heidari M.;Rasouli J. and GhasemnejadBerenji, H.

Publication Date: 2025

Journal: BMC Women's Health 25(1) (pagination), pp. Article Number: 280. Date of Publication: December 2025

Abstract: Objective: Given the significance of ovarian cancer and the importance of early diagnosis, this meta-analysis aimed to assess the diagnostic value of the ROMA index in predicting ovarian cancer in postmenopausal women.

Method(s): This systematic review and meta-analysis were conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Relevant articles were retrieved from databases, including Web of Science, PubMed (MEDLINE), Google Scholar, Scopus, and Embase. The quality of the included studies was assessed using QUADAS-2. The GRADEPRO tool was used to evaluate and grade the quality of the evidence obtained from the meta-analysis. The diagnostic performance of the ROMA index in postmenopausal women was evaluated and comparisons were made using sensitivity, specificity, diagnostic odds ratio (DOR), positive likelihood ratio (LR +), negative likelihood ratio (LR-), and inverse negative likelihood ratio (1/LR-). Data were analyzed in STATA software using the "midas" and "metandi" commands.

Result(s): In this study, 34 out of the 99 identified studies were included in the meta-analysis. Analysis of the ROMA index in postmenopausal Asian women revealed a sensitivity of 88%, specificity of 93%, diagnostic odds ratio (DOR) of 99, positive likelihood ratio (LR +) of 13, negative likelihood ratio (LR-) of 0.131, and inverse negative likelihood ratio (1/LR-) of 8. Furthermore, in cross-sectional studies conducted on postmenopausal women, the ROMA index demonstrated a sensitivity of 90%, specificity of 93%, DOR of 129, LR + of 14, LR - of 0.106, and 1/LR - of 9. Finally, with a cut-off range of 25.1-40, the ROMA index showed a sensitivity of 90%, specificity of 90%, DOR of 76, LR + of 9, LR- of 0.115, and 1/LR- of 9. No significant publication bias was detected in this study ($P > 0.05$).

Conclusion(s): The ROMA index showed greater efficacy in postmenopausal Asian women than in their European counterparts. Cross-sectional studies produced larger estimates than cohort studies. Furthermore, the highest estimate of the ROMA index was obtained with a cutoff of (25.1-40) as opposed to (10-25).

7. Military Exposures and Early Menopause: Findings From the Gulf War Era Cohort Study (GWECS).

Authors: Gibson, Carolyn J.;Cao, Guichan;Inslicht, Sabra;Altman, Allison D.;Haas, Caitlin E.;Schneiderman, Aaron and Dursa, Erin

Publication Date: 2025

Journal: Womens Health Issues

Abstract: OBJECTIVE: Traumatic and environmental exposures during military service may affect reproductive health and ovarian aging, putting women veterans at risk for early menopause. We examined relationships between military exposures and possible early menopause among women 1990-1991 Gulf War veterans. **METHODS:** This is a longitudinal analysis of data from the Gulf War Era Cohort Study. Women Gulf War veterans who completed baseline (1995) and follow-up assessments (2012) and were aged : This is a longitudinal analysis of data from the Gulf War Era Cohort Study. Women Gulf War veterans who completed baseline (1995) and follow-up assessments (2012) and were aged **RESULTS:** The analytic sample included 668 women veterans. Among Gulf War-deployed veterans ($n = 384$), 63% reported MEEs and 26% reported MST during deployment. Within the total sample,

57% met criteria for Gulf War Illness, and 23% met criteria for probable PTSD. At follow-up, 15% had possible early menopause. In adjusted analyses, Gulf War Illness (odds ratio [OR] 1.83; 95% confidence interval [CI] [1.14, 2.95]) and probable PTSD (OR 2.45; 95% CI [1.54, 3.90]) were significantly associated with possible early menopause. **CONCLUSION:** Women veterans may be vulnerable to early menopause (under age 45), which brings additional care considerations for health promotion and symptom management. Menopause care in the Department of Veterans Affairs should include consideration of PTSD and comorbid chronic conditions such as Gulf War Illness, key veteran-centric clinical correlates that may influence the onset and experience of menopause.

8. Transdermal oestradiol and testosterone therapy for menopausal depression and mood symptoms: retrospective cohort study.

Authors: Glynne, Sarah;Kamal, Aini;McColl, Lynsey;Newson, Louise;Reisel, Daniel;Mu, Eveline;Hendriks, Olivia;Saini, Pooja;Gurvich, Caroline and Kulkarni, Jayashri

Publication Date: Jun 16 ,2025

Journal: British Journal of Psychiatry 1-10

Abstract: BACKGROUND: Psychological symptoms in perimenopause and early menopause are common. The impact of menopausal hormone therapy (MHT) on menopausal mood symptoms is unclear. **AIMS:** To assess the impact of 17beta-oestradiol +/- micronised progesterone or the levonorgestrel-releasing intrauterine device, and/or transdermal testosterone, on depressive and anxiety symptoms in peri- and postmenopausal women. **METHOD:** A real-world retrospective cohort study set in the largest specialist menopause clinic in the UK. The Meno-D questionnaire measured mood-related symptoms. **RESULTS:** The study included 920 women: 448 (48.7%) perimenopausal, and 435 (47.3%) postmenopausal. Following initiation/optimisation of MHT, mean Meno-D scores decreased by 44.59% (95% CI -46.83% to -42.34%, *P* v. 48.53%, respectively, *P* = 0.47) and MHT optimisation strategy (MHT users treated with a higher oestradiol dose versus testosterone added versus both a higher oestradiol dose and testosterone, 34.70, 43.93 and 43.25%, respectively, *P* = 0.38). **CONCLUSIONS:** Use of menopausal hormone therapy was associated with significant improvement in mood in peri- and postmenopausal women. Prospective studies and randomised clinical trials are needed to assess the effects of different regimens in different patient populations over longer time periods.

9. Efficacy and safety of fezolinetant and its different doses in the treatment of vasomotor symptoms in menopausal women: a systematic review and meta-analysis.

Authors: Ismail R.A.;Shaheen R.S.;Afifi E.;Sayad R.;Sherif L.N.;Aranda M.I.;Al Gohary R.A. and Elsaeidy, A. S.

Publication Date: 2025

Journal: Middle East Fertility Society Journal 30(1) (pagination), pp. Article Number: 18. Date of Publication: December 2025

Abstract: Introduction: Fezolinetant, an oral NK3R antagonist, selectively blocks NKB signaling, improving vasomotor symptoms by reducing KNDy neuron activity. Our review assesses fezolinetant's efficacy and safety in treating VMSs in menopausal women. Method(s): We conducted a systematic review and meta-analysis synthesizing randomized controlled trials, which were retrieved by systematically searching PubMed, Scopus, Web of Science, Cochrane, Embase, MEDLINE, Ovid full text, and CINAHL until May 2023. We used RevMan V. 5.4 to pool dichotomous data using risk ratio and continuous data using the mean difference with a 95% confidence interval. Result(s): We included eight studies from seven RCTs. Fezolinetant showed significant efficacy in reducing the frequency of vasomotor symptoms in menopausal women, with a mean difference reduction of 1.96 episodes per day (95% CI [- 2.48, - 1.45], $P < 0.00001$). Additionally, women in the fezolinetant group were more likely to acquire a reduction of at least 70% from baseline in VMS frequency (OR = 2.22, 95% CI [1.55, 3.18]; $P < 0.0001$). Fezolinetant also showed significant efficacy in reducing the VMS severity after 12 weeks (MD = - 0.18, 95% CI [- 0.26, - 0.10], $P < 0.0001$). Quality of life measures also favored fezolinetant, showing a significant reduction in MENQOL score by 0.32 points (95% CI [- 0.52, - 0.13], $P = 0.0009$). Importantly, fezolinetant exhibited a favorable safety profile, with no significant difference in liver test elevations compared to placebo after 12 weeks (OR = 1.00, 95% CI [0.68, 1.47], $P = 0.99$). It also exhibited no statistically significant difference in treatment-emergent adverse events after 12 weeks by different doses (30, 45, and 180 mg). Conclusion(s): Fezolinetant demonstrated significant efficacy in reducing VMS frequency and severity and improving quality of life. Safety outcomes revealed no significant differences in liver safety assessments or treatment-emergent adverse events compared to placebo. Trial registration: PROSPERO CRD42023484019.

10. Relation between pelvic organ prolapse and menopausal hormone therapy: nationwide cohort study.

Authors: Jung H.Y.;Kim T.R.;Han G.H. and Yuk, J. S.

Publication Date: 2025

Journal: Obstetrics and Gynecology Science 68(3), pp. 210–220

Abstract: Objective To analyze the relationship between pelvic organ prolapse (POP) and menopausal hormone therapy (MHT). Methods This retrospective cohort study used Korean National Health checkup and insurance data from 2002 to 2019. Women who used MHT for more than 6 months between 2002 and 2011 were included in the MHT group; postmenopausal women with no MHT use comprised the non-MHT group. Results In the non-MHT group, there were 1,001,350 women, while the MHT group had 353,206 women. Tibolone (adjusted hazard ratio [aHR], 0.87; 99% confidence interval [CI], 0.818-0.926) and combined estrogen plus progestin by the manufacturer (CEPM) (aHR, 0.821; 99% CI, 0.758-0.89) were associated with reduced POP risk. The other oral MHT groups and the transdermal estrogen group showed no significant difference in POP risk compared with the non-MHT group (other oral MHT: aHR, 1.045; 99% CI, 0.941-1.161) (transdermal estrogen: aHR, 1.252; 99% CI, 0.731-2.145). Lower body mass index (BMI) (≥ 3 : aHR, 1.916; 99% CI, 1.712-2.144). Conclusion Tibolone and CEPM use were associated with reduced POP risk in

postmenopausal women. Other MHT types showed no significant association with POP.

11. A Systematic Review and Meta-Analysis of Energy-Based Devices for Postmenopausal Sexual Dysfunction.

Authors: Li, Fiona;Shyamsunder, Akshara;Hawes, Erin Nesbitt;Deans, Rebecca and Abbott, Jason

Publication Date: 2025

Journal: Journal of Minimally Invasive Gynecology

Abstract: **OBJECTIVE:** To evaluate the efficacy of energy-based treatments in the management of sexual dysfunction in postmenopausal women and guide evidence-based practice, highlighting quality and evidence gaps. **DATA SOURCES:** We performed a systematic review of available data to December 2024 from PubMed, Embase and Scopus. **METHODS OF STUDY SELECTION:** Two independent reviewers screened 954 possible manuscripts for inclusion using title and abstract with full text extraction as appropriate. All randomized controlled trials (RCT) with sham or placebo control investigating an energy-based vaginal treatment in postmenopausal women that assessed severity of sexual dysfunction or dyspareunia were included in this study. Meta-analyses were performed for any comparable measures of the primary outcome. **TABULATION, INTEGRATION, AND RESULTS:** From 9 included sham or placebo RCT's, 610 participants were enrolled, with 5/9 (55%) trials (including 248 participants in total) using a double-blind methodology. 6 studied carbon dioxide laser, 3 studied radiofrequency treatment, 1 studied erbium-aluminum laser and 1 studied hybrid frequency laser. Pooled data from 6 studies with high heterogeneity suggest significant improvement in sexual function as measured by Female Sexual Function Index with a mean change of 4.25/36 [95% CI: 2.96, 5.53] and improvement in dyspareunia assessed by visual analogue scale out of 10 from 4 studies with a mean change of -5.15 [95% CI-5.97, -4.43]. **CONCLUSION:** Data from both blinded and unblinded RCT's suggest that energy-based treatments may be beneficial for treatment of sexual dysfunction and dyspareunia. High heterogeneity and variability in outcomes despite similar protocols suggests considerable uncertainty of the results and requires caution when interpreting these data.

12. Hormone therapy and insulin resistance in non-diabetic postmenopausal women: a systematic review and meta-analysis.

Authors: Li, Tanya;Jiang, Nathan S.;Kaskey, Julia;Schnatz, Peter F. and Nudy, Matthew

Publication Date: Jun 18 ,2025

Journal: Climacteric 1-9

Abstract: **OBJECTIVE:** Menopause increases the risk of insulin resistance and cardiometabolic diseases. This study summarizes the effects of hormone therapy (HT) on insulin resistance in non-diabetic postmenopausal women. **METHOD:** The study analyzed randomized controlled trials (1998-2024) that assessed the impact of HT on insulin resistance using homeostasis model assessment of insulin resistance (HOMA-IR) in non-diabetic

postmenopausal women. Raw mean differences (RMDs) with 95% confidence intervals (CIs) were calculated using a random-effects model. Subgroup analysis compared estrogen alone (E alone) and estrogen plus progestogen (E + P) to placebo. **RESULTS:** Seventeen randomized controlled trials with 5772 women (3644 on HT: E alone [$n = 1259$] or E + P [$n = 2385$]; 2128 on placebo) were included. The weighted mean (standard deviation) age was 56.91 (5.95) years, with treatment lasting 8 weeks to 3 years. HT significantly reduced HOMA-IR (RMD = -0.24 [-0.32 to -0.16], p $I^2 = 60.3\%$). Subgroup analysis showed reductions in both E alone (RMD = -0.42 [-0.55 to -0.29], p $I^2 = 35\%$) and E + P (RMD = -0.14 [-0.23 to -0.04], $p = 0.005$, $I^2 = 13.7\%$) compared to placebo. **CONCLUSION:** HT significantly lowers insulin resistance in healthy, non-diabetic postmenopausal women, with E alone yielding greater reductions than combination therapy.

13. "I did not recognize myself": a mixed methods study to better understand the experiences of menopause in a US workplace.

Authors: Mallen, Sharon;Coppola, Jennifer;Shaffer, Nicole;Minkin, Mary Jane;Ward, Alexis and Snow, Sally

Publication Date: 2025

Journal: Menopause

Abstract: **OBJECTIVE:** This mixed-methods study aimed to describe the prevalence and impact of menopausal symptoms on midlife women in a US workplace. **METHODS:** An online survey was disseminated to all US-based employees of a US-headquartered pharmaceutical company. Eligible respondents were aged 40-65 years and self-identified as having (or expecting to have) personal experience of menopause. Descriptive statistics were generated. Survey respondents were sampled for in-depth interviews, on which thematic analysis was performed. **RESULTS:** Eligible survey responses were received from 1,642 employees, of which 18 participated in in-depth interviews. The mean respondent age was 51 years, and a range of job roles were represented. The majority of respondents (83%) reported that they had current or prior experience of menopause. Menopause symptoms most commonly impacting workplace performance included changes to sleep patterns, changes to memory, hot flashes and anxiety, although interviews highlighted a diversity of symptom presentations. Menopause symptoms were reported to affect stress levels, confidence in abilities, patience with others, and ability to concentrate at work; 7% of menopausal respondents took time off work due to menopause symptoms. Although half of the respondents disclosed that they would feel extremely or somewhat comfortable discussing menopause with colleagues, only 9% of those with current symptoms reported that they had received support with their menopause symptoms at work. **CONCLUSIONS:** This study found that menopause impacts women's perceptions of their own performance at work, and that many are unsure how to approach conversations about menopause in the workplace. A substantial gap in knowledge about menopause was identified, highlighting the need for further education and support.

14. Risk factors for endometrial cancer in women presenting with postmenopausal bleeding.

Authors: Nahar F.T.;Sengupta R.;Akhter S. and Ahasan, M. N.

Publication Date: 2025

Journal: International Journal of Clinical Obstetrics and Gynaecology. Part B 9(3), pp. 118–122

Abstract: Background: Postmenopausal bleeding (PMB) is a significant clinical symptom to consider in detail due to its potential link with endometrial carcinoma, the most common cause of cancer-related mortality in women. While PMB can be caused by benign pathology such as endometrial atrophy, it is essential to recognize those who are at risk of malignancy. Risk factors including age, obesity, diabetes, late menopause, and endometrial thickness are of utmost significance for the identification of women at higher risk for endometrial cancer.

Objective(s): The aim of this study is to explore the risk indicators of endometrial cancer among women presenting with postmenopausal bleeding, with a view to assisting practitioners in early detection and treatment.

Method(s): A hospital-based observational study was conducted in BIRDEM General Hospital (Women & Children), Dhaka, Bangladesh, during the timeline of January 2024 to December 2024. Postmenopausal women aged 45 years and more who had reported PMB were recruited into the study. Clinical assessment, transvaginal sonography (TVS), and histopathological examination were performed to determine the etiology of the bleeding. Demographic, clinical, and reproductive histories were elicited and data gathered, and statistical analysis was performed using SPSS.

Result(s): Among 68 cases, 27.3% were diagnosed with endometrial carcinoma. There were significant associations between endometrial cancer and advanced age (≥ 60 years), obesity, diabetes, late menopause, and endometrial thickness >10 mm. Multivariate logistic regression analysis indicated obesity (adjusted OR 3.21), diabetes (adjusted OR 2.94), and endometrial thickness >10 mm (adjusted OR 5.67) as independent risk factors for endometrial cancer.

Conclusion(s): Risk variables for endometrial cancer in women presenting with postmenopausal bleeding include nulliparity, late menopause, thickened endometrium, diabetes, and obesity. Early identification of the high-risk women by selective diagnostic testing through transvaginal sonography and biopsy is crucial to improve outcomes. More extensive population-based studies are needed to confirm these findings and define more precise clinical strategies to the management of PMB.

15. Efficacy of CO₂ laser vs vaginal estrogen in perimenopausal women with genitourinary syndrome of menopause: systematic review and meta-analysis.

Authors: Nasr, Aya Mohamed; Saad, Mohab Alsaid; Mohamed, Amer Salah; Hanafi, Yousif Ahmad; Bazbaz, Bilal Walid; Mohamed, Sarra Salah Amer; Selim, Sayed Mahmoud and Altawallbeh, Zaid Fatehi

Publication Date: 2025

Journal: Journal of Sexual Medicine

Abstract: BACKGROUND: Genitourinary syndrome of menopause (GSM) is characterized by vaginal dryness, itching, burning, pain during intercourse, and urinary symptoms. Traditionally, hormone replacement therapy (HRT), specifically estrogen therapy, has been the first-line treatment for GSM, due to its side effects, fractional CO₂ laser therapy has emerged as an

alternative for managing GSM symptoms. **AIM:** The primary focus is to compare CO2 fractional laser therapy and estrogen therapy on postmenopausal women with GSM through systemically reviewing all the randomized controlled trials.

Methods: A comprehensive search of electronic databases, including PubMed, Scopus, Web of Science, Medline, Cochrane, Scielo, UC Berkeley library, and Google Scholar, was performed in October 2024. The inclusion criteria targeted randomized controlled trials comparing CO2 fractional laser therapy and estrogen therapy on postmenopausal women with GSM, which used at least 1 of these outcomes: Female Sexual Function Index (FSFI), Vaginal Health Index, Visual Analog Score, and Urinary Distress Inventory 6. **RESULTS:** Out of 688 studies, 7 studies were included for final analysis with a total of 302 participants: 154 had CO2 fractional laser therapy with a mean age of 55.9 years, and 148 had estrogen therapy with a mean age of 57.2 years. The analysis revealed no statistically significant difference between CO2 laser and estrogen in Vaginal Health Index (mean difference [MD], 1.60; 95% CI, -0.36 to 3.56; P = .09), FSFI-total (MD, 0.10; 95% CI, -2.03 to 2.23; P = .93), and Urinary Distress Inventory 6 (MD, -3.18; 95% CI, -6.77 to 0.42; P = .08). We used a sensitivity analysis on the FSFI-arousal subscale due to high heterogeneity, excluding 1 study. It showed that the CO2 laser group had a statistically significant difference when compared with the estrogen group (MD, 0.47; 95% CI, 0.15-0.79; P = .01). **CONCLUSION:** CO2 laser therapy is an effective line of treatment for GSM. However, its comparison with estrogen therapy did not reach a statistically significant difference favoring one line over the other.

16. Pharmacological Treatments for Menopausal Vasomotor Symptoms: A Systematic Review and Bayesian Network Meta-Analysis of Efficacy and Safety

Authors: Oliveira Amador, Wellgner Fernandes; Saraiva, Caina Araujo; Ruelas, Mariano Gallo; Queiroz, Ivo; Iqbal, Asad; de Souza Gaio, Giovana; Pinilla Alarcon, Juan Alejandro and Roberto De Sa, Joao

Publication Date: Jun 27 ,2025

Journal: European Journal of Obstetrics, Gynecology, & Reproductive Biology 312, pp. 114552

Abstract: OBJECTIVES: To evaluate the efficacy and safety of pharmacological treatments for vasomotor symptoms (VMS) in postmenopausal women. **METHODS:** A systematic search was conducted in PubMed, Embase, and the Cochrane Library through January 2025. Eligible studies were Phase 3 or 4 randomized controlled trials (RCTs) assessing pharmacological treatments for moderate to severe VMS with ≥ 12 weeks of follow-up. A Bayesian random-effects network meta-analysis estimated mean differences (MDs) and risk ratios (RRs) with 95 % credible intervals (CrI). Treatments were ranked using surface under the cumulative ranking (SUCRA). Risk of bias was assessed using Cochrane's tool. **RESULTS:** Forty-one RCTs (n = 14,743; mean age 53.4 years) were included. Synthetic conjugated estrogens (SCE) 1.25 mg showed the greatest reduction in VMS frequency (MD -5.69; 95 % CrI -7.93 to -3.38), while drospirenone 0.5 mg + estradiol 0.5 mg was most effective for severity (MD -1.06; 95 % CrI -1.39 to -0.72). Most treatments had safety profiles similar to placebo, though estradiol 0.5 mg + dydrogesterone 2.5 mg was linked to more adverse events (RR 1.56; 95 % CrI 1.16 to 2.24). No significant differences in serious adverse events were found. SUCRA rankings highlighted SCE and transdermal estradiol gel as most effective for frequency, while drospirenone +

estradiol led for severity. Fezolinetant and elinzanetant showed moderate efficacy. Of the studies, 22 had low risk of bias, and 19 had some concerns. **CONCLUSIONS:** Conjugated estrogens and drospirenone with estradiol are the most effective options for reducing VMS frequency and severity, and Fezolinetant and Elinzanetant showed moderate efficacy, with overall similar safety across treatments.

17. Accessing information on menopause transition and the role of digital health technologies: A narrative review

Authors: Osborne, Alison K. and Sillence, Elizabeth

Publication Date: Jun 26 ,2025

Journal: Women & Health 1-14

Abstract: Digital health resources can provide an effective way for women to seek advice and share information. The aim of the current review is to understand the role of digital technologies in accessing digital menopause information. Six databases were examined for papers considering the use of digital technology in accessing digital information on menopause, published before March 2025. From 1970 papers identified, 14 papers were included in the review. Digital technologies are used to seek further information on the menopause, whether in addition to information provided by healthcare professionals, or to track symptoms or to normalize personal experiences. Trust in the source of the digital menopause information impacts whether it is accessed and how the information received is appraised. The impact of using digital technologies for menopause information was positive, including increased feelings of empowerment, decision making satisfaction, and the facilitation of conversations with others around menopause. However, representation of those who experience menopause was imperative. Overall, women find using digital technologies for menopause to be a positive experience. Future research should address the unique and complementary value of different types of digital technology to support menopause and understand how technologies can be better integrated into discussions with healthcare professionals.

18. Systematic review on the relationship between menopausal hormone replacement therapy, sarcopenia, and sarcopenia-related parameters.

Authors: Osterdahl M.F.;Ni Lochlainn M.;Welch C.;Rymer J.;Ashworth M.;Whitney J.;Duncan E.L. and Steves, C. J.

Publication Date: 2025

Journal: Maturitas 199(pagination), pp. Article Number: 108609. Date of Publication: August 2025

Abstract: Objective: Whilst the beneficial effect of menopausal hormone replacement therapy (HRT) on osteoporosis is well established, its effect on sarcopenia is less clear. We conducted a systematic review of evidence exploring the relationship between HRT and sarcopenia. Method(s): We searched OVID Medline, Embase, CINAHL and Web of Science to 8 August

2024, identifying both in randomised controlled trials (RCTs) and observational studies of community-dwelling women. We excluded articles focussed on androgen therapy, or hormone therapy for indications other than menopause. Our primary outcome was the effect of HRT upon sarcopenia defined by a consensus set of criteria (e.g. the definition proposed by the European Working Group on Sarcopenia in Older People 2). Grip strength, measures of physical performance, and radiological measures of muscle quantity were included as secondary outcomes. Reporting follows PRISMA guidelines.

Result(s): Searches identified 6090 articles, of which 43 were included in our final analysis. No studies used a consensus definition of sarcopenia. Most used data over 20 years old, with older formulations of HRT, though formulations were inconsistently reported. Of the 15 RCTs included, two of six suggested a beneficial effect on grip strength, one of six on physical performance, and seven of 12 on radiologically assessed muscle quantity. Of the 28 observational studies included, three of 11 suggested a beneficial effect on grip strength, two of seven on physical performance and three of 18 on radiologically assessed muscle quantity. No studies reported detrimental effects on muscle. Risk of bias was high/severe.

Observational models seldom adjusted for confounders.

Conclusion(s): No studies used modern consensus definitions of sarcopenia. For secondary outcomes, there was no consistent evidence of benefit, with methodological flaws, and outmoded HRT formulations.

19. Systematic review on the relationship between menopausal hormone replacement therapy, sarcopenia, and sarcopenia-related parameters

Authors: Osterdahl, Marc F.;Ni Lochlainn, Mary;Welch, Carly;Rymer, Janice;Ashworth, Mark;Whitney, Julie;Duncan, Emma L. and Steves, Claire J.

Publication Date: Jun 17 ,2025

Journal: Maturitas 199, pp. 108609

Abstract: OBJECTIVE: Whilst the beneficial effect of menopausal hormone replacement therapy (HRT) on osteoporosis is well established, its effect on sarcopenia is less clear. We conducted a systematic review of evidence exploring the relationship between HRT and sarcopenia. **METHODS:** We searched OVID Medline, Embase, CINAHL and Web of Science to 8 August 2024, identifying both in randomised controlled trials (RCTs) and observational studies of community-dwelling women. We excluded articles focussed on androgen therapy, or hormone therapy for indications other than menopause. Our primary outcome was the effect of HRT upon sarcopenia defined by a consensus set of criteria (e.g. the definition proposed by the European Working Group on Sarcopenia in Older People 2). Grip strength, measures of physical performance, and radiological measures of muscle quantity were included as secondary outcomes. Reporting follows PRISMA guidelines. **RESULTS:** Searches identified 6090 articles, of which 43 were included in our final analysis. No studies used a consensus definition of sarcopenia. Most used data over 20 years old, with older formulations of HRT, though formulations were inconsistently reported. Of the 15 RCTs included, two of six suggested a beneficial effect on grip strength, one of six on physical performance, and seven of 12 on radiologically assessed muscle quantity. Of the 28 observational studies included, three of 11 suggested a beneficial effect on grip strength, two of seven on physical performance and three of 18 on radiologically assessed muscle quantity. No studies reported

detrimental effects on muscle. Risk of bias was high/severe. Observational models seldom adjusted for confounders. **CONCLUSIONS:** No studies used modern consensus definitions of sarcopenia. For secondary outcomes, there was no consistent evidence of benefit, with methodological flaws, and outmoded HRT formulations.

20. Effects of Plant-Derived Dietary Supplements on Lipid Profiles in Menopausal Women: An Updated Systematic Review and Meta-Analysis of Randomized Placebo-Controlled Trials

Authors: Park, Soo-Hyun;Oh, Mi-Ra;Lee, Jangho;Choi, Hyo-Kyoung and Hwang, Jin-Taek

Publication Date: 2025

Journal: Phytotherapy Research

Abstract: A Comprehensive evaluation of plant-derived supplements for hypolipidemic effects in menopausal women requires robust clinical trials and integrated analysis of diverse research findings. To address this, we conducted a systematic review and meta - analysis to evaluate the effects of plant-derived supplements on lipid profiles in menopausal women. Relevant studies were identified through systematic searches in MEDLINE, Embase, Web of Science, and CENTRAL until June 2022. Randomized controlled trials assessing the effects of plant-derived supplements on lipid profiles in menopausal women were included. A total of 61 studies were reviewed, and 60 studies with 6127 participants were included in the meta-analysis. Study quality was evaluated using the Cochrane Risk of Bias tool, and pooled data were analyzed with a random effects model for meta-analysis. The analysis revealed significant reductions in total cholesterol (SMD = -0.17, 95% CI: -0.26 to -0.08), triglycerides (SMD = -0.16, 95% CI: -0.26 to -0.05), and LDL-cholesterol (SMD = -0.19, 95% CI: -0.27 to -0.10). Subgroup analysis revealed that phytoestrogens, particularly from soy, were especially effective. Favorable outcomes were also observed in postmenopausal women with amenorrhea for over 1 year and in interventions lasting 3-12 months. However, variations in supplement formulations and insufficient dosage-specific data limited the findings. Further clinical research on plant-derived supplements should be accumulated to clarify their effects. Despite these limitations, this review provides updated evidence and highlights promising materials for improving blood lipid profiles. It also offers insights into optimizing clinical trial designs for dietary supplements, paving the way for more targeted and effective interventions. The study protocol (CRD42022383752) was registered in the PROSPERO database.

21. Adjuvant treatment with tamoxifen for estrogen receptor-positive breast cancer and gynecological risks in premenopausal and perimenopausal women - a systematic review

Authors: Plougmann Gislinge, Julie Isabelle;Rubeck Petersen, Kresten;Borgquist, Signe and Ravn, Pernille

Publication Date: Jun 20 ,2025

Journal: Climacteric 1-9

Abstract: OBJECTIVE: Tamoxifen (TMX) is known to increase the risk of endometrial cancer (EC) in postmenopausal women, but data on the effects in premenopausal and perimenopausal women remain inconsistent and not well illuminated. This study aimed to evaluate whether TMX increases the risks of gynecological symptoms and EC in premenopausal and perimenopausal women receiving adjuvant therapy for estrogen receptor-positive breast cancer. **METHODS:** Systematic searches in PubMed, Cochrane and Web Of Science yielded 319 relevant articles, of which 38 were analyzed after excluding duplicates and non-qualifying studies. The Oxford Criteria were used to ensure consistent evaluation before final inclusion. No meta-analysis was conducted due to study heterogeneity. **RESULTS:** Ten studies (two meta-analyses, one systematic review, four retrospective cohort studies, one retrospective comparative study, one prospective cohort study and one case-control study) were included. TMX was associated with an increased risk of EC in premenopausal and perimenopausal women (mean relative risk 2.25; standard deviation 0.9) compared to no treatment or treatment with raloxifene or aromatase inhibitors. Risk appeared in some studies to increase with treatment duration and persisted for ≥ 5 years post treatment. TMX also significantly increased the risk of gynecological symptoms, benign and premalignant endometrial pathology, intrauterine procedures and hysterectomy ($p < 0.001$). **CONCLUSIONS:** TMX seems to increase EC risk and significantly increase the risk of gynecological symptoms in premenopausal and perimenopausal women, with risk persisting years following treatment cessation. Healthcare professionals should counsel these women on potential risks and emphasize prompt evaluation of gynecological symptoms.

22. Vulvovaginal estrogen therapy for urinary symptoms in postmenopausal women: a review and meta-analysis

Authors: Porcari, Irene;Uccella, Stefano;Casprini, Chiara;Bosco, Mariachiara;Zorzato, Pier Carlo and Garzon, Simone

Publication Date: Jun 26 ,2025

Journal: Climacteric 1-10

Abstract: OBJECTIVE: This study aimed to summarize available evidence on the efficacy of vulvovaginal topical estrogen therapy on lower urinary tract symptoms (LUTS) of genitourinary syndrome of menopause. **METHOD:** Multiple databases were systematically searched from inception to October 2024 to identify all studies providing pretreatment and post-treatment data for menopausal women with LUTS who received vulvovaginal estrogen therapy. A random effect meta-analysis was conducted (PROSPERO registration number: CRD42024517516). **RESULTS:** Seventeen studies were included for a total of 2111 patients. The pooled odds ratio for the occurrence of considered outcomes after versus before treatment was 0.14 (95% confidence interval [CI] 0.05-0.36; $I^2 = 73\%$) for recurrent urinary tract infections, 0.12 (95% CI 0.05-0.29; $I^2 = 62\%$) for stress urinary incontinence, 0.22 (95% CI 0.16-0.32; $I^2 = 0\%$) for urge incontinence, 0.11 (95% CI 0.06-0.18; $I^2 = 23\%$) for urgency, 0.22 (95% CI 0.16-0.23; $I^2 = 0\%$) for frequency and 0.24 (95% CI 0.17-0.34; $I^2 = 0\%$) for nocturia. The pooled mean difference for vaginal pH was -1.29 (95% CI -1.66 to -0.91; $I^2 = 96\%$). **CONCLUSIONS:** Vulvovaginal topical estrogen therapy appears to improve all analyzed LUTS in menopausal women. Available evidence supports current guidelines recommending vulvovaginal topical estrogen therapy for the management of these symptoms in menopausal

women.

23. Urinary Incontinence and Menopausal Symptom Burden.

Authors: Qiao, Erica;Burns, Haley;Rodriguez, Maria I. and Cichowski, Sara B.

Publication Date: 2025

Journal: Obstetrics & Gynecology

Abstract: Urinary incontinence (UI) is a common midlife symptom that often co-occurs with other menopausal changes. In this cross-sectional survey of 2,084 Oregon residents (approximately 30% rural), 45.8% reported UI. Menopause symptoms burden, measured by the Menopause Rating Scale, was higher for every UI subtype (all $P < .001$). Moderate-to-severe menopause burden increased adjusted odds of stress, urgency, and mixed UI 2-fold to 13-fold ($P < .001$). Reported evaluation and treatment rates were low across all UI subtypes (2.0-14.6%), and it remains unclear how often participants were screened or asked about symptoms by health care professionals. This highlights the need to address both actual and perceived gaps in menopause and continence care through proactive, patient-centered screening.

24. Good Intentions, Poor Execution? Why Current Workplace Policies on Menstrual and Menopausal Health Fall Short.

Authors: Reinhardt A.;Adler H.;Howe D.;K. Mardon A.;O'Shea M. and Armour, M.

Publication Date: 2025

Journal: Women's Reproductive Health (pagination), pp. Date of Publication: 2025

Abstract: Menstrual and menopausal workplace policies are vital for equity and well-being at the workplace-but remain uneven, underdeveloped, and rarely evaluated. While menopause has gained attention, menstruation and menstrual disorders are often overlooked. This commentary explores why menopause has become the more "acceptable" entry point and how this reflects broader stigma and power dynamics. We argue for inclusive, evidence-based policies that (1) address menstrual stigma, (2) promote leadership awareness, (3) use intersectional, participatory approaches, (4) embed thorough evaluation frameworks, and (5) go beyond leave policies to reframe reproductive health as a shared organizational concern and not as an individual burden.

25. Exploring the role of menopausal symptoms and self-compassion in post-menopausal women: Implications for social well-being.

Authors: Sharma, Spriha and Negi, Sunder Kala

Publication Date: Jul 01 ,2025

Abstract: In this study, the authors explored how menopausal symptom severity and self-compassion impact social well-being among 224 employed post-menopausal women aged 50-60. Participants completed the Menopause Rating Scale, Self-compassion Scale, and Social Well-Being Scale. Groups were categorized by symptom severity and self-compassion levels. Our results showed symptom severity significantly affected social well-being, while self-compassion influenced social coherence. However, no significant interaction was found between symptom severity and self-compassion on overall social well-being. The authors emphasize the social challenges faced by women with severe menopausal symptoms and suggests fostering self-compassion could enhance social support and acceptance during this stage of life.

26. The Role of Vaginal Oestrogen Therapy in Postmenopausal Women With Pelvic Organ Prolapse: Does It Have Any Impact on Perioperative Outcomes? A Systematic Review of Randomised Controlled Trials

Authors: Sicilia, Gilda; Vitale, Salvatore Giovanni; D'Alterio, Maurizio Nicola; Saponara, Stefania; Scicchitano, Francesco; Fulghesu, Anna Maria; Nappi, Rossella E. and Angioni, Stefano

Publication Date: 2025

Journal: BJOG: An International Journal of Obstetrics & Gynaecology

Abstract: **BACKGROUND:** Pelvic organ prolapse (POP) affects up to 50% of postmenopausal women, negatively impacting sexual function and quality of life. While surgery remains the primary treatment, increasing attention has been given to perioperative vaginal oestrogen therapy and its potential impact on surgical outcomes. **OBJECTIVES:** This systematic review aims to evaluate the latest evidence on the role of vaginal oestrogen therapy in perioperative management and its impact on surgical outcomes in postmenopausal women with POP. **SEARCH STRATEGY:** A systematic literature search was performed across PubMed, MEDLINE, ClinicalTrials.gov and Embase from inception to December 31, 2024. No geographic restrictions were imposed and only peer-reviewed English-language studies were included. **SELECTION CRITERIA:** Only prospective, randomised controlled trials (RCT) examining perioperative vaginal oestrogen therapy in postmenopausal women undergoing POP surgery were included. **DATA COLLECTION AND ANALYSIS:** Study identification and data extraction were independently performed by two and three authors, respectively. The Cochrane Collaboration's tool was used to assess bias, with disagreements resolved by a fourth reviewer. **MAIN RESULTS:** Ten studies involving 709 patients were analysed. Vaginal oestrogen therapy showed a positive effect on Vaginal Maturation Index (VMI), vaginal thickness and surgeon's perception of tissue quality. It also appeared to reduce postoperative urinary tract infections (UTIs) and antibiotic use. However, no significant impact on sexual function, surgical ease, rates of surgical failure or POP recurrence was observed. **CONCLUSIONS:** Despite potential benefits in enhancing vaginal tissue quality and reducing UTIs and antibiotic use, current evidence is limited. Further standardised trials are needed for more definitive conclusions.

27. Positive impact of a menopause website - MyMenoplan.org - on treatment intentions, knowledge, and decision making: A randomized controlled trial.

Authors: Snyder L.B.;Newton K.M.;Ng H.X.;Reed S.D.;Guthrie K.A.;Zambrano V. and LaCroix, A. Z.

Publication Date: 2025

Journal: Maturitas 199(pagination), pp. Article Number: 108630. Date of Publication: August 2025

Abstract: Objective: Assess the impact of a new website, MyMenoplan.org, on menopause knowledge, decision-making progress, treatment and coping intentions among people experiencing perimenopause and menopause. The website was designed to provide women and their clinicians with comprehensive, evidence-based information and decision-making tools about a broad range of symptoms and treatments, address common questions and facilitate conversations with clinicians when desired. Study design: Women were recruited online and randomized to interact with the MyMenoplan.org website created by MsFLASH investigators (n = 200) or control websites (n = 210) for at least 20 min before completing an online survey. Women in the control arm could choose any website(s), including three suggested high-quality websites from governmental or non-profit organizations. Fraud-detection protocols were followed. Outcome differences by arm were estimated via adjusted linear regression models. Primary outcomes: Behavioral change intentions, menopause knowledge, decision-making progress, and user website experience. Result(s): 99 % of controls visited at least one recommended website. Compared with the control arm, the MyMenoplan.org arm reported significantly higher levels of intent to change treatment (3.87 vs. 3.61), knowledge of menopause symptoms and treatments (4.17 vs. 3.85), treatment decision-making progress (3.94 vs. 3.71), clarity about benefits and risks of treatments (4.04 vs. 3.81), perceived website quality (4.05 vs. 3.70), intentions to return to the website (4.40 vs. 3.97), and likelihood of recommending it to others (4.35 vs. 4.04; each p < 0.001). Conclusion(s): MyMenoplan.org is the first NIH-funded website shown to be effective in helping women learn and make decisions about management of the menopause transition. The website serves as a model for providing much-needed, evidence-based information for health-care providers and women nearing or in perimenopause and menopause. Clinical Trial Registration Number: ClinicalTrials.gov ID NCT05299983

28. Positive impact of a menopause website - MyMenoplan.org - on treatment intentions, knowledge, and decision making: A randomized controlled trial.

Authors: Snyder, Leslie B.;Newton, Katherine M.;Ng, Hui Xin;Reed, Susan D.;Guthrie, Katherine A.;Zambrano, Viviana and LaCroix, Andrea Z.

Publication Date: Jun 05 ,2025

Journal: Maturitas 199, pp. 108630

Abstract: OBJECTIVE: Assess the impact of a new website, MyMenoplan.org, on menopause

knowledge, decision-making progress, treatment and coping intentions among people experiencing perimenopause and menopause. The website was designed to provide women and their clinicians with comprehensive, evidence-based information and decision-making tools about a broad range of symptoms and treatments, address common questions and facilitate conversations with clinicians when desired. **STUDY DESIGN:** Women were recruited online and randomized to interact with the MyMenoplan.org website created by MsFLASH investigators (n = 200) or control websites (n = 210) for at least 20 min before completing an online survey. Women in the control arm could choose any website(s), including three suggested high-quality websites from governmental or non-profit organizations. Fraud-detection protocols were followed. Outcome differences by arm were estimated via adjusted linear regression models. **PRIMARY OUTCOMES:** Behavioral change intentions, menopause knowledge, decision-making progress, and user website experience. **RESULTS:** 99 % of controls visited at least one recommended website. Compared with the control arm, the [MyMenoplan.org](https://www.mymenoplan.org) arm reported significantly higher levels of intent to change treatment (3.87 vs. 3.61), knowledge of menopause symptoms and treatments (4.17 vs. 3.85), treatment decision-making progress (3.94 vs. 3.71), clarity about benefits and risks of treatments (4.04 vs. 3.81), perceived website quality (4.05 vs. 3.70), intentions to return to the website (4.40 vs. 3.97), and likelihood of recommending it to others (4.35 vs. 4.04; each $p < 0.001$). **CONCLUSION:** MyMenoplan.org is the first NIH-funded website shown to be effective in helping women learn and make decisions about management of the menopause transition. The website serves as a model for providing much-needed, evidence-based information for health-care providers and women nearing or in perimenopause and menopause. **CLINICAL TRIAL REGISTRATION NUMBER:** ClinicalTrials.gov ID NCT05299983.

29. A service evaluation of an online Cognitive Behaviour Therapy program for troublesome menopausal Hot Flushes and Night Sweats in work settings.

Authors: Stefanopoulou, Evgenia;Chapelle, Samantha;Lewis, David;Larkin, Jan and Hunter, Myra S.

Publication Date: Jun 19 ,2025

Journal: Post Reproductive Health

Abstract: Objective The most frequently reported menopausal symptoms are hot flushes and night sweats (HFNS). This study evaluated the feasibility, and generated preliminary data on the efficacy, of a self-guided, internet-delivered Cognitive Behaviour Therapy (iCBT) program for HFNS in working menopausal women. Methods Participants were UK employees who accessed the iCBT program via an Employee Assistance Program. Adherence consisted of 'non-starters', 'ended as planned (women who received at least 75% of support)' and 'completers'. Program usage, completion rates, user feedback and changes in outcome measures (HFNS frequency, problem-rating, anxiety, depression, work and social adjustment) were assessed. Results Program activation rate was 61%. 426 women accessed an introductory session, with 213 completing the first iCBT session and 62 completing the program. Attrition ranged from 50% to 21% between sessions. Upon completion, there was a significant reduction in all outcome measures. Higher rates of reliable improvement were gained by those with higher anxiety and depression scores at baseline. Most women found the program helpful and easy to use. Conclusions Findings suggest that an iCBT program for

working women experiencing menopausal HFNS is feasible and promising in terms of efficacy. Further studies are needed to establish and implement effective retention strategies to improve compliance with and, thus, the efficacy of self-managed internet-based interventions.

30. Spontaneous pyometra in postmenopausal women and gynecologic cancer-a preliminary study based on experience of a tertiary medical center.

Authors: Tal Bliman, Yael;Rafaeli Yehudai, Tal;Shiber, Yair;Mor, Matan and Vaknin, Zvi

Publication Date: 2025

Journal: Menopause

Abstract: OBJECTIVE: Pyometra is a rare but serious condition, particularly in postmenopausal women. While commonly linked to postpartum or post-surgical complications, spontaneous pyometra may also be associated with underlying gynecologic malignancies. We aim to examine the association between postmenopausal spontaneous pyometra (PMSP) and gynecologic cancers. **METHODS:** A retrospective review of consecutive women admitted with pyometra between 2007 and 2023, at a university-affiliated tertiary medical center. Demographic and clinical data were reviewed. Women with pyometra and gynecologic cancer were compared with those without. **RESULTS:** Of 231 admissions for pyometra, 47 women with PMSP were identified. The cohort was divided into a benign group (n=35, 74.4%) and malignancy group (n=12, 25.6%). Endometrial carcinoma (n=8, 67%) was the predominant malignancy, followed by cervical cancer (n=4, 33%). Although age, age at menopause, and parity showed no significant statistical differences between the groups, a higher body mass index was significantly associated with endometrial malignancy ($P = 0.014$). Postmenopausal bleeding as an accompanying symptom to pyometra was also more common in the malignancy group ($P=0.001$). The prevalence of PMSP was 1.1% for endometrial cancer and 2.2% for cervical cancer. **CONCLUSIONS:** PMSP is significantly associated with gynecologic malignancies, particularly endometrial and cervical cancers. Notably, women with endometrial malignancy had a higher BMI and were more likely to present with accompanying postmenopausal bleeding. These findings suggest that in postmenopausal women presenting with spontaneous pyometra, clinicians should maintain a high index of suspicion for malignancy. Early identification and appropriate management are crucial to improving patient outcomes.

31. Optimizing the management of menopause at the workplace: a scoping review of workplace non-hormone interventions and impact on women with menopause.

Authors: Taniskidi, Angeliki;Mitsinga, Eirini;Binnington, Dani;Talaulikar, Vikram and Al Wattar, Bassel H.

Publication Date: 2025

Journal: Menopause

Abstract: IMPORTANCE: There is a need for interventions that employers and employees can adopt to optimize the health, safety, and productivity of women with menopause at the

workplace. **OBJECTIVE:** We conducted a structured scoping review to summarize the literature and identify effective interventions that could help women manage menopausal symptoms at the workplace. **EVIDENCE REVIEW:** We searched electronic databases (MEDLINE and EMBASE) until July 2024 for all studies that evaluated any non-hormone interventions used among women with menopause at the workplace and reported as per PRISMA-ScR. We used a standardized data extraction tool to capture relevant data and conducted a thematic analysis to identify the prominent themes. **FINDINGS:** Out of 4,284 potentially relevant citations, we included seven studies, including four randomized trials and three observational studies. Four studies evaluated cognitive behavioral interventions showing improvement in hot flushes, workability, presenteeism, and quality of life, though results varied between studies. One randomized study examined the impact of a structured aerobic exercise program on menopausal symptoms and work-related outcomes showing slight improvement in workability and mental strain. Raja Yoga meditation combined with sleep hygiene education was evaluated in one randomized study showing improvements in insomnia, sleep quality, and menopausal symptoms. Offering regular consultations at an outpatient menopause clinic for managing symptoms through lifestyle modifications improved menopausal symptoms and workability at 3 months after adjusting for potential confounders. **CONCLUSIONS AND RELEVANCE:** Several behavioral and lifestyle interventions can help to optimize the health, productivity, and quality of life of women with menopause at the workplace. However, there is limited high-quality evidence on the best available intervention with wide variation in reported outcomes and measurement tools.

32. Health Maintenance and Unique Health Needs of the Perimenopausal and Postmenopausal Woman with Inflammatory Bowel Disease

Authors: Wang, Grace;Ching, Carmen;Hanna, Youstina;Tandon, Parul and Huang, Vivian

Publication Date: 2025

Journal: Digestive Diseases & Sciences

Abstract: BACKGROUND: The care of women with inflammatory bowel disease (IBD) presents unique challenges for physicians given the impact of their disease on the management of issues throughout their lifespan. Preventative care plays a critical role, given the long-term sequelae associated with chronic inflammation and immunosuppressive therapy. Despite this, there remains a gap in knowledge regarding the health maintenance needs of women over 40, particularly those in perimenopausal and postmenopausal stages. This is especially important given the first cohort of patients treated with novel IBD therapies, including biologic agents, are approaching advanced age. **OBJECTIVE:** To review the health maintenance needs and clinical recommendations for the perimenopausal and postmenopausal woman with IBD. **RESULTS:** Key areas of focus include sexual and reproductive health, menopause-related concerns, prevention and screening of cervical and breast cancer, osteoporosis, and atherosclerotic disease. We summarize current guidelines and available literature, and discuss gaps in existing literature. **CONCLUSION:** As the population of women with IBD age, individualized care for this population is increasingly important. This review highlights key health maintenance needs and provides a practical overview to care for this commonly overlooked patient population.

33. Associations between parity, age at childbirth, and later-life mortality in postmenopausal women mediated by premature menopause.

Authors: Xing, Zailing;Kirby, Russell S.;Chen, Henian;Cain, Mary Ashley and Alman, Amy C.

Publication Date: 2025

Journal: American Journal of Obstetrics & Gynecology

Abstract: **OBJECTIVE:** We aimed to examine the long-term effects of parity, age at first childbirth, and age at last childbirth on mortality in postmenopausal women. **STUDY DESIGN:** The data were from the Women's Health Initiative involving 106,760 postmenopausal women. We used propensity score matching to create matched samples, where each exposure group was matched with a reference group based on their propensity scores. We employed multilevel Cox proportional hazard models to estimate hazard ratios and 95% confidence intervals to examine the associations of parity and age at childbirth with mortality. We conducted multiple mediation analyses to estimate the effects of potential mediators on the associations. **RESULTS:** Compared to parity of 2, the hazard ratios (95% confidence intervals) for the association of all-cause mortality with parity of 0, 1, 3, 4, and 5+ were 1.09 (1.05–1.13), 1.11 (1.06–1.16), 1.01 (0.99–1.04), 1.00 (0.97–1.03), and 1.00 (0.96–1.03), respectively. Age at first childbirth of <20, age at last childbirth of <25, and age at last childbirth ≥40 years were associated with increased mortality risks, with the corresponding hazard ratios (95% confidence intervals) of 1.14 (1.09–1.19), 1.06 (1.02–1.11), and 1.07 (1.00–1.15), respectively. Women with parity of 0, 4+, or age at first childbirth <25 years had shorter lifespans than the reference groups. Premature menopause was a pivotal mediator in the associations of parity and age at first childbirth with mortality. **CONCLUSION:** We found long-term adverse impacts of nulliparity and young age at first childbirth on women's mortality risk and lifespan. Premature menopause may operate as a critical intermediate between childbirth and later-life mortality, underscoring the importance to identify at-risk women early.

34. Hormone Therapy and Increased Risk of Psoriasis in Reproductive-age and Postmenopausal Women: A Nationwide Cohort Study and Target Trial Emulation.

Authors: Yang, Hui-Wen;Chen, Yi-Hsien;To, Sheng-Yin;Wen, Yuan-Liang;Kao, Senyeong;Chen, Liang-Hsuan and Kao, Li-Ting

Publication Date: 2025

Journal: British Journal of Dermatology

Abstract: **BACKGROUND:** Hormonal therapy (HT) is widely administered for contraception and menopausal symptom management. However, its impact on psoriasis risk remains unclear, requiring an evaluation across diverse age groups to inform clinical practice and optimize treatment strategies. **OBJECTIVE:** To investigate the association between HT and the risk of psoriasis in reproductive-age and postmenopausal women. **METHODS:** This study utilized both nationwide cohort design and target trial emulation, analyzing data from Taiwan's National Health Insurance Database (2001-2021). Women over 20 years old without a prior history of psoriasis, ovarian cancer, or breast cancer were included, segmented into

reproductive-age (50 years) groups. Women who initiated HT were assigned as the exposed group, while women without HT formed the comparison group. The primary outcome was the incidence of psoriasis over a five-year period. The study applied inverse probability of treatment weighting (IPTW) and Cox proportional hazards models to estimate hazard ratios (HRs). Both intention-to-treat (ITT) and per-protocol (PP) analyses were performed to enhance the robustness of the findings. **RESULTS:** In the postmenopausal cohort, comprising 1,482,302 HT users and 1,313,799 nonusers, the IPTW-adjusted HR for psoriasis in the ITT analysis was 1.48 (95% CI 1.44-1.52). The PP analysis indicated a more pronounced risk, with an HR of 5.93 (95% CI 5.66-6.22). Among the reproductive-age cohort, which included 3,849,721 HT users and 1,585,461 nonusers, the IPTW-adjusted HR in the ITT analysis was 1.93 (95% CI 1.90-1.99). In the PP analysis, the risk increased, showing an HR of 7.85 (95% CI 7.56-8.15). These findings highlight the significantly elevated psoriasis risk associated with HT, especially in younger women. **CONCLUSION:** This study establishes an association between HT and an increased risk of psoriasis in both reproductive-age and postmenopausal women using a nationwide cohort design and target trial emulation. These findings further highlight the potential influence of hormonal factors on psoriasis development. Clinicians should remain attentive to early signs of psoriasis in women receiving HT to ensure timely recognition and management.

35. Hormone Replacement Therapy in Postmenopausal Women Undergoing Total Hip Arthroplasty is Associated With Reduced 10-Year Periprosthetic Femoral Fracture Rate.

Authors: Zhao A.Y.;Oguejiofor A.;Harris A.B.;Wang K.;Gu A.;Melvin J.S.;Rao S. and Thakkar, S. C.

Publication Date: 2025

Journal: Journal of Arthroplasty 40(7), pp. 1772–1776.e1

Abstract: Background: In postmenopausal women who are estrogen deficient, hormone replacement therapy (HRT) has been shown to improve fragility fracture risk. However, few studies have examined the relationship between HRT and periprosthetic fracture (PPF) risk after total hip arthroplasty (THA). The purpose of this study was to determine the impact of HRT use on 10-year PPF risk following THA.

Method(s): A retrospective cohort study was conducted using a large national database. Women who underwent elective THA were identified and stratified based on preoperative (< 6 months) HRT use. Those taking HRT were propensity score matched at a 1:2 ratio to those who do not have a history of HRT use based on age and Charlson Comorbidity Index score. Kaplan-Meier and Cox proportional hazards analyses were conducted to determine rates of PPF, revision, and aseptic loosening within 10 years of surgery. Regression analyses were performed to determine 90-day rates of venous thromboembolism (VTE) after controlling for perioperative VTE prophylaxis. In total, 21,220 patients were included.

Result(s): Patients who were taking HRT before THA demonstrated a lower risk of PPF (hazard ratio: 0.8; 95% confidence interval: 0.6 to 0.9) within 10 years of THA, but a similar risk of all-cause revision surgery and revision for aseptic loosening. The HRT cohort demonstrated lower odds of deep vein thrombosis (odds ratio: 0.7; 95% confidence interval: 0.6 to 1.0) and similar rates of pulmonary embolism.

Conclusion(s): In postmenopausal women, HRT use before elective THA was associated with

lower rates of PPF within 10 years of surgery and was not associated with increased VTE risk. Given these results, appropriate HRT usage in patients may have a role in reducing PPF after THA.

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36. Sleep quality in perimenopausal and postmenopausal women: which exercise therapy is the most effective? A systematic review and network meta-analysis of 31 RCTs

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Abstract: The effectiveness of various exercise types in improving sleep quality in menopausal women remains controversial. This network meta-analysis was designed to evaluate and rank the efficacy of five exercise modalities on sleep quality in peri-postmenopausal women. Five English databases and three Chinese databases were searched for randomized controlled trials (RCTs) published from inception to July 2024. Pairwise meta-analysis and frequentist network meta-analyses were performed based on the random effects model. The analysis revealed that younger menopausal women (age $p = 0.007$). Future research should develop more acceptable exercise intervention models and use combined and flexibility exercises to explore the optimal parameters of exercise for menopausal women.

In the news

MHRA approves elinzanetant to treat moderate to severe vasomotor symptoms (hot flushes) caused by menopause

Medicines and Healthcare products Regulatory Agency

8 July 2025

“The Medicines and Healthcare products Regulatory Agency (MHRA) has today, 8 July, become the first regulator in the world to approve elinzanetant (Lynkuet) for the treatment of moderate to severe vasomotor symptoms (hot flushes) associated with the menopause.”

<https://www.gov.uk/government/news/mhra-approves-elinzanetant-to-treat-moderate-to-severe-vasomotor-symptoms-hot-flushes-caused-by-menopause>

Menopause Exchange Newsletter

Issue 104 Spring 2025

- The menopause in the workplace
- Pelvic health at the menopause
- HRT and cardiovascular health
- Plant oestrogens

Anyone with an interest in the menopause, midlife and post-menopausal health can receive The Menopause Exchange quarterly newsletters for FREE: www.menopause-exchange.co.uk to subscribe

Sources used:

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