

# Menopause

The Journal of The North American Menopause Society

VOLUME 30, ISSUE 4 2023



Supplemental Digital Content is available.

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Is the vaginal microbiome a marker or an effector of vaginal health? Caroline M. Mitchell, MD, MPH

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Complexities of intimate partner violence and insomnia: why some midlife women cannot sleep

Joan Fowler Shaver, PhD, FAAN and Nancy Fugate Woods, BSN, PhD, FAAN

## **Original Studies**



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Effect of ospemifene on vaginal microbiome in postmenopausal women with vulvovaginal atrophy

Stefania Alvisi, MD, Camilla Ceccarani, PhD, Claudio Foschi, MD, Maurizio Baldassarre, PhD, Alessandra Lami, MD, Marco Severgnini, MSc, Tania Camboni, PhD, Clarissa Consolandi, PhD, Renato Seracchioli, MD, and Maria Cristina Meriggiola, MD, PhD

This study analyzed the vaginal microbiome profiles in postmenopausal women with and without vulvovaginal atrophy (VVA) and assessed the effect of ospemifene and systemic hormone treatment on the vaginal microbiome of women with VVA. Women with VVA were characterized by a significant reduction of Lactobacillus and a significant increase of bacterial diversity compared to women without VVA; both treatments improved vaginal microbiota, and ospemifene reduced potential harmful bacteria such as Staphylococcus and Clostridium.

#### 370

# Lifetime history of interpersonal partner violence is associated with insomnia among midlife women veterans

Lizabeth A. Goldstein, PhD, Karen P. Jakubowski, PhD, Alison J. Huang, MD, MAS, Karen H. Seal, MD, MPH, Shira Maguen, PhD, Sabra S. Inslicht, PhD, Amy L. Byers, PhD, MPH, and Carolyn J. Gibson, PhD, MPH Midlife women veterans enrolled in Department of Veterans Affairs health care completed an adapted version of the Extended-Hurt, Insult, Threaten, Scream to assess lifetime history of intimate partner violence and the Insomnia Severity Index to assess current insomnia. Lifetime history of intimate partner violence was associated with twofold to fourfold odds of current clinical insomnia.

(continued)



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### Migraine and sleep quality: does the association change in midlife women?

Stephanie S. Faubion, MD, MBA, NCMP, Summer Ghaith, BS, Juliana M. Kling, MD, MPH, NCMP, Kristin Mara, MS, Felicity Enders, PhD, Amaal J. Starling, MD, and Ekta Kapoor, MBBS, NCMP

This cross-sectional study confirms an association between a history of migraine and poor sleep in premenopausal women. The relationship in perimenopausal women appears to be explained by other factors known to affect sleep quality in the menopause transition, such as anxiety, depression, and the presence of vasomotor symptoms.



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# Safety and effectiveness of a novel home-use therapeutic ultrasound device for the treatment of vaginal dryness in postmenopausal women: a pilot study

Martha Hickey, MD, Rodney Baber, MD, John Eden, MD, Janelle Brennan, MD, Deborah Bateson, MD, Mindy Goldman, MD, Holly Rockweiler, MS, and Darlene Dreon, DrPH A home-use, therapeutic ultrasound device was safe and effective for treating vaginal dryness after 12 weeks, and effectiveness was maintained to 1 year. Therapeutic ultrasound could offer a new, nonhormone treatment option for postmenopausal women with vulvovaginal atrophy.



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# Maternal age at birth of last child and cardiovascular disease mortality later in life among a national cohort of postmenopausal women from the United States

Duke Appiah, PhD, MPH, Catherine Kim, MD, Taylor Fuquay, BS, Cornelia de Riese, MD, PhD, MBA, NCMP, Imo A. Ebong, MD, MS, and Chike C. Nwabuo, MD, MPH

Maternal age at last birth of child is increasing in the United States, and it has been reported to influence future chronic diseases. In this study of nationally-representative sample of postmenopausal women, there was no conclusive association between maternal age at last birth of child and cardiovascular disease mortality later in life.

### 401

### Menopause in people with cystic fibrosis

Katherine Prochownik, MD, Raksha Jain, MD, MSc, Jennifer L. Taylor-Cousar, MD, MSCS, ATSF, Daniel R. Lavage, MA, Olivia M. Stransky, MPH, Holly N. Thomas, MD, MS, NCMP, and Traci M. Kazmerski, MD, MS

This is the first study to examine the perimenopausal experiences of women with cystic fibrosis (CF) in the era of modulator therapy. As the life expectancy of people with CF continues to grow, CF care teams need to be able to address the perimenopausal needs of their female patients as well as the interactions between the menopausal transition and CF.

### 406

Does the addition of serum antimüllerian hormone concentrations to the Framingham Risk Score and Pooled Cohort Equations improve the prediction of cardiovascular disease?

Mina Amiri, PhD, Narjes Ahmadi, MD, Farzad Hadaegh, MD, Maryam Mousavi, PhD, Fereidoun Azizi, MD, and Fahimeh Ramezani Tehrani, MD

The present study revealed that the addition of serum antimüllerian hormone concentrations to Framingham Risk Score and Pooled Cohort Equations could potentially improve the risk prediction of cardiovascular disease.

#### 414

# Efficacy of Erbium YAG laser treatment in overactive bladder syndrome: a randomized controlled trial

Keerati Chiengthong, MD and Suvit Bunyavejchevin, MD, MHS

This study showed the efficacy of vaginal Erbium YAG laser in treatment of overactive bladder (OAB) and vaginal atrophy in postmenopausal women. The improvement of overactive bladder symptoms scores was confirmed by the bladder diary.

#### 421

# Associations between the impact of menopausal symptoms and fall-related self-efficacy

João Espírito Santo, MHS, Fidel Hita-Contreras, MD, PhD,

Nuno Eduardo Marques de Loureiro, PhD, Vânia Brandão Loureiro, PhD,

Agustín Aibar-Almazán, PhD, María del Carmen Carcelén-Fraile, PhD, and Raúl Ortiz-Ouesada, PhD

The findings of this study show that, after taking into account possible confounders, increased severity of menopausal symptoms at a somatic level was associated with heightened fear of falling and diminished balance confidence.

#### 427

# Evaluation of 28-day estradiol and progesterone vaginal rings in a phase 1 clinical pharmacokinetic study

Louise Hull, MBChB, Bronwyn G. A. Stuckey, MBBS, FRACP, Kimberly Hartman, MD, Nadene Zack, MS, and David R. Friend, PhD

The results of the pharmacokinetic and safety assessments of two new intravaginal rings in postmenopausal women provide evidence that plasma concentration of 17  $\beta$ -estradiol over time should be sufficient to potentially treat women suffering from vasomotor symptoms and genitourinary symptoms of menopause. The data also suggest that release of progesterone should provide adequate endometrial protection.

#### 437

### Sleep duration and the onset of menopause in Japanese women

Chisato Nagata, MD, PhD, Keiko Wada, MD, PhD, Michiyo Yamakawa, PhD, Yuma Nakashima, DDS, Masaaki Sugino, MD, and Tomoka Mori, MD *This study of premenopausal Japanese women showed that short sleep duration was associated with later onset of menopause. Sleep duration may affect the hormonal environment related to* 

with later onset of menopause. Sleep duration may affect the hormonal environment related to follicular degeneration.

#### 441

# $Effectiveness\ of\ vaginal\ estriol\ with\ lactobacilli\ on\ urinary\ symptoms\ in\ postmenopausal\ women:\ a\ randomized-controlled\ trial$

Apiwat Jongjakapun, MD, Woraluk Somboonporn, MD, and Teerayut Temtanakitpaisan, MD Low antimüllerian hormone at baseline was associated with greater adiposity concurrently and across approximately 9 years of follow-up. Whether low antimüllerian hormone is a useful marker of metabolic risk across midlife requires further research.

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## Epidemiological study of genitourinary syndrome of menopause in Japan (GENJA study)

Hikaru Tomoe, MD, PhD, Yumi Ozaki, MD, PhD, Mayuko Yamamoto, Mami Kuwajima, Noriko Ninomiya, MD, Yuki Sekiguchi, MD, PhD, Yoshikazu Sato, MD, PhD, Satoru Takahashi, MD, PhD, and Koichi Nagao, MD, PhD

The authors of this study conducted the first online survey using a Japanese-translated Vulvovaginal Symptoms Questionnaire and reported that the prevalence of genitourinary syndrome of menopause with genital or sexual symptoms in Japanese women aged 40 years and older was 11.6%, and 31.7% in sexually active women.

#### **Review Article**

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# The Women's Health Initiative randomized trials of menopausal hormone therapy and breast cancer: findings in context

Rowan T. Chlebowski, MD, PhD and Aaron K. Aragaki, MS

Despite randomized clinical trials indicating that estrogen plus progestin and estrogen therapy differentially influence breast cancer risk, controversy persists. Findings from observational studies and Women's Health Initiative randomized trials are summarized, and challenges to the design, conduct, and findings of the Women's Health Initiative trials are addressed.

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Menopause: The Journal of The North American Menopause Society (ISSN 1072-3714) is published monthly online-only by Wolters Kluwer Health, Inc. Annual subscription rate: \$663.