



# Menopause

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## CONTENTS

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### Editorials

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251

#### **Sleep duration, insomnia, and Parkinson disease**

Victor W. Henderson, MD, MS

253

#### **The impact of postmenopausal hormone therapy on the duodenal microbiome**

James K. Pru, PhD

### Original Studies

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255

#### **Association of sleep disturbance with Parkinson disease: evidence from the Women's Health Initiative**

Hind A. Beydoun, PhD, MPH, Michelle J. Naughton, PhD, May A. Beydoun, PhD, Aladdin H. Shadyab, PhD, Robert L. Brunner, PhD, Jiu-Chiuan Chen, MD, ScD, Mark Espeland, PhD, Sally A. Shumaker, PhD, and Alan B. Zonderman, PhD

*This study examined sleep disturbance in relation to Parkinson's Disease (PD) during 10+ years of follow-up among postmenopausal women from the Women's Health Initiative. Among postmenopausal women, sleep disturbance was associated with approximately 10-30% increased PD risk after ~16 years follow-up.*

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264

#### **Duodenal microbiome changes in postmenopausal women: effects of hormone therapy and implications for cardiovascular risk**

Gabriela Leite, PhD, Gillian M. Barlow, PhD, Gonzalo Parodi, BS, Maya L. Pimentel, BS, Christine Chang, RN, Ava Hosseini, MPH, Jiajing Wang, PhD, Mark Pimentel, MD, and Ruchi Mathur, MD

*The results of this study support previous studies suggesting that hormone therapy may have beneficial effects following menopause, and although preliminary, may also support a beneficial effect of hormone therapy on the duodenal microbiome.*

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SDC

276

**The long-term association between bilateral oophorectomy and depression: a prospective cohort study**

Elvira V. Bräuner, PhD, Louise F. Wilson, PhD, Trine Koch, MSc, Jane Christensen, MSc, Christian Dehlendorff, PhD, Anne Katrine Duun-Henriksen, PhD, Lærke Priskorn, PhD, Julie Abildgaard, MD, PhD, Mette K. Simonsen, MD, PhD, Jeanette T. Jørgensen, MSc, Youn-Hee Lim, PhD, Zorana J. Andersen, PhD, Anders Juul, MD, PhD, DMSc, and Martha Hickey, MBChB, MD, FRANZCOG

*In this cohort of Danish female nurses, bilateral oophorectomy at age  $\geq 51$  years, but not at younger ages, was associated with a slightly higher rate of depression compared to those who retained their ovaries.*

284

**Association between intergenerational violence exposure and maternal age of menopause**

Holly Foster, PhD, John Hagan, PhD, Jeanne Brooks-Gunn, PhD, and Jess Garcia, MS

*This study investigates whether maternal violence exposure personally and through her child are associated with mother's age of menopause, controlling for covariates, using nationally representative data. This study is the first to find maternal reproductive aging is associated with intergenerational violence exposure, including maternal childhood physical abuse and her child's sexual abuse.*

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293

**Oral postmenopausal hormone therapy and genetic risk on venous thromboembolism: gene-hormone interaction results from a large prospective cohort study**

Jihye Kim, PhD, Shilpa N. Bhupathiraju, PhD, Laura B. Harrington, PhD, Kaitlin A. Hagan, PhD, Sara Lindström, PhD, JoAnn E. Manson, MD, DrPh, NCMP, Peter Kraft, PhD, and Christopher Kabrhel, MD

*Using a large prospective cohort of US women, this study confirmed a greater risk of venous thromboembolism (VTE) associated with oral hormone therapy (HT) use among postmenopausal women. In addition, this study observed joint effects of oral HT use and a VTE-associated genetic predisposition on absolute risk of VTE among the postmenopausal women.*

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304

**Effects of E2/P4 oral capsules on bone turnover in women with vasomotor symptoms**

Michael R. McClung, MD, Risa Kagan, MD, NCMP, Shelli Graham, PhD, Brian Bernick, MD, Sebastian Mirkin, MD, and Ginger Constantine, MD

*In the REPLENISH trial, postmenopausal women with a uterus treated with oral 17 $\beta$ -estradiol and progesterone (E2/P4; 1 mg/100 mg or 0.5 mg/100 mg) for moderate to severe vasomotor symptoms had reductions in markers of bone turnover at 6 and 12 months of E2/P4 treatment, suggesting a potential skeletal benefit with E2/P4.*

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309

**NT-pro B-type natriuretic peptide, early menopause, and incident heart failure in postmenopausal women of the ARIC study**

Imo A. Ebong, MD, MS, Machel D. Wilson, PhD, Patricia Chang, MD, MHS, Duke Appiah, PhD, Tamar Polonsky, MD, MSCI, Christie Ballantyne, MD, and Alain G. Bertoni, MD, MPH

*The association of N-Terminal pro B-type natriuretic peptide (NT-proBNP) with incident heart failure with preserved ejection fraction is similar irrespective of early menopause status. However, the association of NT-proBNP with incident heart failure with reduced ejection fraction is greater in women with early menopause when compared to those without early menopause.*

317

**Low sexual function is associated with menopausal status in mid-aged women with human immunodeficiency virus infection**

Edward Mezones-Holguín, MD, Msc, José Arriola-Montenegro, MD,  
Víctor Cutimanco-Pacheco, MD, Ali Al-kassab-Córdova, Bsc, Roberto Niño-García, MD,  
Ludwing A. Zeta, MD, Diego Urrunaga-Pastor, MD, Juan E. Blümel, MD, PhD,  
Peter Chedraui, MD, PhD, and Faustino R. Pérez-López, MD, PhD

*HIV-infected postmenopausal women have a higher prevalence of low sexual function than non-postmenopausal women with HIV, even when adjusting for multiple potential confounders.*

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327

**Validation of the Vulvovaginal Symptom Questionnaire in Turkish women with genitourinary syndrome of menopause**

Arzu Bilge Tekin, MD, Murat Yassa, MD, Uzeyir Kalkan, MD, Mehmet Akif Sargin, MD,  
Ilkhan Keskin, MD, Serhat Usta, MD, Dogus Budak, MD, Ayca Miray Buran, MD,  
and Niyazi Tug, MD

*This study shows successful cross-cultural adaptation and validation with sufficient psychometric properties for Vulvovaginal Symptom Questionnaire to be used in Turkish postmenopausal women with genitourinary syndrome of menopause.*

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335

**Declining serum bone turnover markers are associated with the short-term positive change of lumbar spine bone mineral density in postmenopausal women**

Shengli Zhao, MD, Xiaoyi Mo, MD, Zhenxing Wen, MD, Ming Liu, MS, Zhipeng Chen, MD,  
Wei Lin, MD, Zifang Huang, MD, and Bailing Chen, MD

*Declining N-terminal middle segment osteocalcin, propeptide of type I procollagen,  $\beta$ -C-terminal telopeptide of type I collagen, and Phosphorus are associated with the short-term increase of lumbar spine 1–4 bone mineral density within 1 year in postmenopausal women.*

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**Clinical Corner**

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**Invited Review**

344

**Cosmetic dermatology in menopause**

Yakir S. Levin, MD, PhD

*Cosmetic concerns, including skin discoloration, wrinkles, skin thinning, laxity, and hollowing of the face, are commonly encountered by women around menopause. This work describes anatomic changes that occur with aging and summarizes evidence for the possible role of menopause in these changes.*

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**Review Articles**

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351

**Comparing estrogen-based hormonal contraceptives and hormone therapy on bone mineral density in women with premature ovarian insufficiency: a systematic review**

Alexa Fine, BSc (Hons.), Alicja Busza, MD, Lisa M. Allen, MD, FRCSC,  
Catherine Kelly, MD, MSc, FRCPC, Wendy Wolfman, MD, FRCSC, FACOG, NCMP,  
Michelle Jacobson, MD, MHSc, FRCSC, NCMP, and Iliana C. Lega, MD, Msc, FRCPC

*This is the first systematic review to include studies that directly compared oral contraceptives and hormone therapy on bone outcomes in primary ovarian insufficiency (POI). These results indicate future, larger scale trials are needed to further understand the optimal hormone therapy for bone density in POI.*

360

**Menopausal experiences of South Asian immigrant women: a scoping review**

Ping Zou, RN, PhD, Yan Luo, RN, PhD, Melody Wyslobicky, BHSc, MD (c),  
Haniah Shaikh, BHSc, MD (c), Arzoo Alam, BHSc, MPH (c), Wei Wang, RN, MN, NP, and  
Hui Zhang, RN, PhD (c)

*Culturally sensitive care, increased discussion on sexual health, support networks and reduction of socioeconomic barriers are needed to address the health needs of South Asian immigrant women. Further research is needed to better understand South Asian immigrant women's menopausal needs and help guide intervention design.*

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