



# Menopause

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**When are the most vulnerable, more vulnerable to cognitive changes during the menopause transition?**

Sara E. Looby, PhD, ANP-BC, FAAN

### Original Studies

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**Short-term impact of surgically induced menopause on cognitive function and wellbeing in women at high risk for ovarian cancer following risk-reducing bilateral salpingo-oophorectomy**

Heidi Chang, MD, Daniella Kamara, MS, LCGC, Catherine Bresee, MS, Jenny Lester, MPH, and Ilana Cass, MD

*Premenopausal women at high risk of ovarian cancer who choose to undergo risk-reducing salpingo-oophorectomy may experience declines in subjective cognition at 6 months following surgery. Hormone therapy may impact this decline over short follow-up.*

(continued)

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**Cognitive changes during the menopausal transition: a longitudinal study in women with and without HIV**

Pauline M. Maki, PhD, Gayle Springer, MLA, Kathryn Anastos, MD, Deborah R. Gustafson, PhD, Kathleen Weber, MS, David Vance, PhD, Derek Dykxhoorn, PhD, Joel Milam, PhD, Adaora A. Adimora, MD, Seble G. Kassaye, MD, Drenna Waldrop, PhD, and Leah. H. Rubin, PhD

*In this longitudinal study of low-income women of color, including women with HIV, cognitive performance in the domains of verbal learning, verbal memory and attention/working memory declined with advancing menopause stage. Many of these cognitive changes reached a clinically significant level of cognitive impairment.*

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**The short-term effects of estradiol, raloxifene, and a phytoestrogen in women with perimenopausal depression**

Peter J. Schmidt, MD, Shau-Ming Wei, PhD, Pedro E. Martinez, MD, Rivka R. Ben Dor, MD, Gioia M. Guerrieri, DO, Paula P. Palladino, MD, Veronica L. Harsh, MD, Howard J. Li, MD, Paul Wakim, PhD, Lynnette K. Nieman, MD, and David R. Rubinow, MD

*This study examined the short-term efficacies of three estrogen-like compounds under placebo-controlled conditions in women with perimenopause-related depression (PMD). No significant therapeutic benefits of either Rimostil or raloxifene compared with placebo in PMD were observed; however, evidence, although not strong, supported the beneficial effects of transdermal 17-beta estradiol in these women.*

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**Brain functional changes in perimenopausal women: an amplitude of low-frequency fluctuation study**

Ningning Liu, MD, Yue Zhang, MD, Shuang Liu, MD, Xuening Zhang, MD, and Huijun Liu, PhD

*The results of this study showed that the amplitude of low-frequency fluctuation and gray matter volume values of certain brain regions related to cognitive function were changed in perimenopausal women. Such functional brain alterations may provide more information regarding the mechanism of cognitive dysfunction in perimenopausal women.*

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**#Menopause on Instagram: a mixed-methods study**

Morgan E. Arseneau, BS, Uba Backonja, PhD, MS, RN, Michelle L. Litchman, PhD, FNP-BC, Rojin Karimanfard, BS, Xiaoming Sheng, PhD, and Lisa Taylor-Swanson, BS (Hons), PhD, MAcOM  
*Topics frequently mentioned on Instagram related to menopause have low prominence in the biomedical literature. This suggests key topics that could be explored by researchers in the future.*

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**A prospective study of the relationships between change in body composition and cardiovascular risk factors across the menopause**

Aaron Dehghan, MBBS, Senthil K. Vasan, PhD, Barbara A. Fielding, PhD, and Fredrik Karpe, MD, PhD

*The increase in cardiovascular disease risk factor burden across menopause may not be driven by changes in body composition, rather by functional changes in end organs such as adipose tissue and liver.*

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**Association of waist-to-height ratio with estimated glomerular filtration rate in middle-aged and elderly Chinese**

Lu Tian, MD, Han Zheng, MD, Yanzhi Li, MD, and Chongqi Jia, MD, PhD

*The relationship between waist-to-height ratio and estimated glomerular filtration rate tended to be inverse-L-shaped in menopausal women and men, but may vary with menopausal status in women. Additional studies are required to clarify the effect of menopause on the association of central obesity with renal impairment.*

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**Serum isoflavones and lignans and odds of breast cancer in pre- and postmenopausal Chinese women**

Xiao-Li Feng, MS, Suzanne C. Ho, MPH, PhD, Xiao-Xia Zhan, MD, Luo-Shi-Yuan Zuo, BS, Xiong-Fei Mo, MS, Xin Zhang, MS, Alinuer Abulimiti, BS, Chu-Yi Huang, BS, and Cai-Xia Zhang, MS, PhD

*Higher levels of certain serum isoflavones and lignans were associated with reduced odds of breast cancer in premenopausal women, but the interaction was statistically significant only for daidzein.*

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**Treatment with a dual amylin and calcitonin receptor agonist improves metabolic health in an old, obese, and ovariectomized rat model**

Anna Katri, PhD, Ditte Reker, PhD, Morten A. Karsdal, PhD, Anne-Christine Bay-Jensen, PhD, and Kim Henriksen, PhD

*Obesity and metabolic dysregulation are common phenomena following menopause in women. This study demonstrates that a dual amylin and calcitonin receptor agonist possesses a sustained ability to reduce weight and improve glucose tolerance in a model of metabolic dysregulation following menopause.*

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**The role of cardiorespiratory fitness on quality of life in midlife women**

Michelle Q. Flesaker, Corinna Serviente, PhD, Lisa M. Troy, PhD, and Sarah Witkowski, PhD

*This study reports that higher cardiorespiratory fitness is associated with better quality of life in healthy midlife women. This knowledge supports the development of exercise therapies targeted to improve quality of life in this population.*

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**Brief Report**

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**Hypothalamic-pituitary-adrenal axis, subjective, and thermal stress responses in midlife women with vasomotor symptoms**

Margo D. Nathan, MD, Aleta Wiley, MPH, Pamela B. Mahon, PhD, Julie Camuso, BS, Kathryn Sullivan, BA, Kathleen McCormick, BA, Akanksha Srivastava, BA, Kim Albert, PhD, Paul Newhouse, MD, and Hadine Joffe, MD, MSc

*The findings of this study provide preliminary evidence that women with vasomotor symptoms of menopause (VMS) exhibit both diminished cortisol and subjective stress responses to a social-evaluative stress paradigm, and reduced thermal sensitivity on a thermal stress paradigm compared to women without VMS.*

## Clinical Corner

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### NAMS Practice Pearl

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#### **Genitourinary syndrome of menopause: the unmet need**

Susan Kellogg Spadt, PhD, CRNP, IF, CSC, and Lisa C. Larkin, MD, FACP, NCMP, IF  
*Many postmenopausal women suffer needlessly with painful symptoms of genitourinary syndrome of menopause (GSM). Despite many available safe and effective therapies, GSM often goes undiagnosed and untreated. This Practice Pearl discusses the pathophysiology, the symptoms, and the effects of GSM and reviews available treatment options*

## Review Articles

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#### **Transitioning to the menopausal transition: a scoping review of research on the late reproductive stage in reproductive aging**

Nancy Fugate Woods, PhD, RN, FAAN, Ellen Sullivan Mitchell, PhD, Nina Coslov, and Marcie K. Richardson, MD

*Harmonizing the results of studies of the late reproductive stage (LRS) and late reproductive age is essential to understand more completely women's experiences of the LRS and to allow clinicians to provide better support for women during this time.*

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#### **Possible association of early menopause with worse physical function: a systematic review**

Pedro Rafael de Souza Macêdo, MSc, Tiago Novais Rocha, MSc, Sabrina Gabrielle Gomes Fernandes, MSc, Mariana Carmem Apolinário Vieira, PhD, Javier Jerez-Roig, PhD, and Saionara Maria Aires da Câmara, PhD

*Although there is evidence of an association between premature and early menopause with poor physical function, the high heterogeneity among the studies limits the consensus about the results, and more research is needed using longitudinal methodology.*

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