



# Menopause

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#### **Hot flashes and the placebo effect: effective placebo or a research artifact?**

Raja Sayegh, MD, FACOG, FACS

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#### **Lessons from shaking menopausal hands**

Amos Pines, MD

### Original Studies

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#### **Estimation of placebo effect in randomized placebo-controlled trials for moderate or severe vasomotor symptoms: a meta-analysis**

Tianyu Zhou, MD, MSc

*By analyzing results of randomized controlled trials following the 2003 FDA's guidance for industry, it was estimated that at least in trials assessing hormone therapy or serotonin and norepinephrine reuptake inhibitors, placebo arms could achieve a 5.44 vasomotor symptom frequency reduction per day and a 0.36 severity reduction at week 12 compared to baseline.*

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#### **Relationship between handgrip strength and endogenous hormones in postmenopausal women**

Pascual García-Alfaro, MD, Sandra García, BSc, Ignacio Rodríguez, MSc, Luciana Bergamaschi, MD, and Faustino R. Pérez-López, MD, PhD

*The results of this study showed that studied ovarian steroids, adrenal hormones, insulin-like growth factor-1, parathormone, and vitamin D were not associated with hand grip strength.*

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**Palpitations across the menopause transition in SWAN: trajectories, characteristics, and associations with subclinical cardiovascular disease**

Janet S. Carpenter, PhD, RN, FAAN, Yamnia I. Cortés, PhD, MPH, FNP-BC, FAHA, James E. Tisdale, PharmD, Ying Sheng, PhD, RN, Elizabeth A. Jackson, MD, MPH, Emma Barinas-Mitchell, PhD, and Rebecca C. Thurston, PhD

*Women's reported occurrence of palpitations showed three distinct trajectories across the menopause transition. Women in the most symptomatic trajectory had a more adverse baseline reproductive and health-related profile, though none of the trajectories were associated with longer term atherosclerosis or arterial stiffness.*

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**The association of hormone therapy with blood pressure control in postmenopausal women with hypertension: a secondary analysis of the Women's Health Initiative clinical trials**

Xuezhi Jiang, MD, PhD, NCMP, Aaron K. Aragaki, MS, Matthew Nudy, MD, JoAnn E. Manson, MD, DrPH, Aladdin H. Shadyab, PhD, MS, MPH, Robert A. Wild, MD, MPH, PhD, Carolina Valdiviezo, MD, Margery Gass, MD, Lisa Warsinger Martin, MD, Kathy Pan, MD, Marcia L. Stefanick, PhD, John A. Robbins, MD, and Peter F. Schnatz, DO, FACOG, FACP, NCMP

*Among hypertensive postmenopausal women, oral estrogen therapy (with or without progestin) compared to placebo was associated with a small, but statistically significant, increase in systolic blood pressure (SBP). The increase in SBP, however, was not associated with an increase in antihypertensive medication use over time among women randomized to hormone therapy compared to placebo.*

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**The association between diabetes type, age of onset, and age at natural menopause: a retrospective cohort study using the Canadian Longitudinal Study on Aging**

Vrati M. Mehra, MSc, Christy Costanian, PhD, Hugh McCague, PhD, Michael C. Riddell, PhD, and Hala Tamim, PhD

*The results of this study point to early menopause among young women living with a diabetes diagnosis. These findings should allow for more focused research geared towards understanding the long-term health implications of diabetes on women's reproductive health and aging.*

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**Effects of bothersome symptoms during the late reproductive stage and menopausal transition: observations from the Women Living Better Survey**

Nancy Fugate Woods, BSN, PhD, FAAN, FGSA, Nina Coslov, MBA, and Marcie K. Richardson, MD, FACOG

*Little is known about the effects of symptoms women experience during the late reproductive menopausal transition stages. Although most groups of bothersome symptoms were related to interference with daily activities and relationships and "not feeling like myself," only fatigue/pain symptoms were related to women's ratings of their health.*

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**Isolated vitamin D supplementation improves the adipokine profile of postmenopausal women: a randomized clinical trial**

Eneida B. Schmitt, MD, Claudio L. Orsatti, PhD, Luciana Cangussu, PhD,  
Flavia N. Bueloni-Dias, MD, Priscila F. Poloni, MD, Daniel Spadoto-Dias, MD,  
and Eliana A. P. Nahas, MD, PhD

*Daily supplementation with 1,000 IU of vitamin D alone was associated with an increase in adiponectin and a decrease in resistin, suggesting a beneficial effect on the adipokine profile of postmenopausal women with vitamin D deficiency.*

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**Relationship of sarcopenia with bone geometry and mass among postmenopausal women**

Caroline F. França, MSc, Camila Miranda, MSc, Fernanda M. Martins, PhD,  
Danyelle C. S. Pelet, PhD, Anderson D. de Souza Lino, PhD, Markus V. C. Souza, PhD,  
and Fábio L. Orsatti, PhD

*Low muscle mass, strength (dynamometry), and power (5 times Sit-to-Stand Tests), alone or in combination (i.e., sarcopenia), are associated with low areal bone mineral density, impaired bone geometry, and, as a consequence, of low bone strength in postmenopausal women. These measures may assist in identifying and preventing postmenopausal women at risk for hip fractures.*

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**Treatment and resource utilization for menopausal symptoms in the United States: a retrospective review of real-world evidence from US electronic health records**

Barbara DePree, MD, NCMP, MMM, Katherine Houghton, MSc, Aki Shiozawa, DrPH, MBA,  
Elizabeth Esterberg, MS, Deanna D. King, MS, PhD, Janet Kim, PhD,  
and Shayna Mancuso, DO, FACOG

*A high proportion of women with vasomotor symptoms remain untreated even when experiencing bothersome symptoms of menopause. Improved management of vasomotor symptoms is required to provide relief from the symptoms effectively and safely.*

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**A dietary intervention for vasomotor symptoms of menopause: a randomized, controlled trial**

Neal D. Barnard, MD, FACC, Hana Kahleova, MD, PhD, Danielle N. Holtz, BS,  
Tatiana Znayenko-Miller, MSHS, Macy Sutton, MS, Richard Holubkov, PhD, Xueheng Zhao, PhD,  
Stephanie Galandi, MS, and Kenneth D. R. Setchell, PhD, FAASLD

*A dietary intervention consisting of a plant-based diet, minimizing oils, and daily soybeans significantly reduced the frequency and severity of postmenopausal hot flashes and associated symptoms.*

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**Changes in cardiovascular disease risk factors during menopausal transition in Japanese women: the Circulatory Risk in Communities Study (CIRCS)**

Saki Teramura, MSc, Tomoko Sankai, MD, PhD, Kazumasa Yamagishi, MD, PhD,  
Mitsumasa Umesawa, MD, PhD, Mina Hayama-Terada, MD, PhD, Isao Muraki, MD, PhD,  
Mari Tanaka, PhD, Tomomi Kihara, MD, PhD, Tetsuya Ohira, MD, PhD,  
Hironori Imano, MD, PhD, Renzhe Cui, MD, PhD, Yuji Shimizu, MD, PhD,  
Takeo Okada, MD, PhD, Akihiko Kitamura, MD, PhD, Masahiko Kiyama, MD, PhD,  
and Hiroyasu Iso, MD, PhD, MPH

*Menopause may be a crucial factor related to changes in serum total cholesterol, non-high-density lipoprotein cholesterol, triglycerides, uric acid, hemoglobin, and liver enzymes.*

## Review Articles

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### **Effects of nutritional interventions on the severity of depressive and anxiety symptoms of women in the menopausal transition and menopause: a systematic review, meta-analysis, and meta-regression**

Ruth B. Grigolon, RD, PhD, Gilciane Ceolin, RD, MSc, Yan Deng, MD, Alexander Bambokian, BScH, Elena Koning, BScH, MSc, Jennifer Fabe, RD, MSc, Maiara Lima, MSc, Fernando Gerchman, MD, PhD, Claudio N. Soares, MD, PhD, FRCPC, MBA, Elisa Brietzke, MD, MSc, PhD, and Fabiano A. Gomes, MD, MSc, PhD

*Nutritional interventions are promising approaches for the management of mood/anxiety symptoms in women during the menopausal transition and in post-menopausal years. Due to significant heterogeneity and risk of bias among studies, the actual effect of different interventions is still unclear.*

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### **Resistance training for postmenopausal women: systematic review and meta-analysis**

Kamilla Mayr Martins Sá, MD, Gabriela Resende da Silva, BS, Ulisses Kiskissian Martins, BS, Mileny Esbravatti Stephano Colovati, PhD, Giuliana Raduan Crizol, Rachel Riera, MD, PhD, Rafael Leite Pacheco, MD, MSc, and Ana Luiza Cabrera Martimbiano, PhD

*Resistance training seems to promote some benefits on functional capacity, bone mineral density, and a reduction in hot flush frequency and fat mass compared to no exercise or aerobic exercise.*

## Letters to the Editor

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