

Menopause

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A lifetime approach to disease manifestation

George Helmrich, MD, CCD

Original Studies

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Perception of higher frequency of daily hot flashes in 50-year-old women today: a study of trends over time during 48 years in the Population Study of Women in Gothenburg, Sweden

Kerstin Rödström, MD, PhD, Lilian Weman, BA, Valter Sundh, MS, and Cecilia Björkelund, MD, PhD

In this prospective longitudinal study of 50-year-old women, nearly twice as high odds of reporting daily hot flashes in the later born women compared to earlier born were found. When controlling for potential predictors there was still an obvious difference, which cannot be explained in this study.



1130

Self-reported menstrual cycle length during reproductive years in relation to menopausal symptoms at midlife in Project Viva

Lidia Mínguez-Alarcón, PhD, MPH, Sheryl L. Rifas-Shiman, MPH, Diana C. Soria-Contreras, PhD, Marie-France Hivert, MD, Jan Shifren, MD, NCMP, Emily Oken, MD, MPH, and Jorge E. Chavarro, MD, ScD

Women with menstrual cycles ≤25 days had more somatic and psychological menopausal symptoms as well as reached menopause earlier than women with menstrual cycles between 26 and 34 days. History of menstrual cycle length was not associated with urogenital menopausal symptoms assessed in the Menopause Rating Scale.

(continued)



1137

Association between lower parity and low muscle mass in postmenopausal women: data from KNHANES (2010-2011)

So Hyun Ahn, MD, Heeyon Kim, MD, Hye In Kim, MD, Bo Hyon Yun, MD, PhD, Hye Jung Shin, MS, Yun Ho Roh, PhD, Seung Joo Chon, MD, PhD, and Seok Kyo Seo, MD, PhD Lower parity is associated with increasing the odds of low muscle mass in postmenopausal Korean women. Moderate aerobic activity may be effective in lowering the odds of low muscle mass in postmenopausal women with lower parity.



1145

Menopausal vasomotor symptoms and adiponectin among midlife women

Rebecca C. Thurston, PhD and Yuefang Chang, PhD

Adiponectin is the most abundant adipokine in the body, with lower levels linked to adverse cardiovascular outcomes. In a study of 300 peri- and postmenopausal nonsmoking women who underwent physiologic assessments of vasomotor symptoms (VMS), physiologic VMS were associated with lower adiponectin after considering potential confounders.



1150

Long-term changes in plasma proteomic profiles in premenopausal and postmenopausal Black and White women: the Atherosclerosis Risk in Communities study

Duke Appiah, PhD, MPH, Pamela J. Schreiner, PhD, MS, James S. Pankow, PhD, MPH, Guy Brock, PhD, Weihong Tang, MD, PhD, Faye L. Norby, PhD, MPH, Erin D. Michos, MD, MHS, Christie M. Ballantyne, MD, and Aaron R. Folsom, MD, MPH This study, which to date is the most extensive characterization of plasma proteins in the largest sample of pre- and postmenopausal women, identified several novel proteins that differ significantly between pre-and postmenopausal women. The discovered proteins are associated with several important cellular and molecular processes that may play a role in cardiometabolic diseases.



1161

Association of lifetime lactation and age at natural menopause: a prospective cohort study Natalie V. Scime, PhD, Alison K. Shea, MD, PhD, NCMP, Peter D. Faris, PhD, and Erin A. Brennand, MD, MSc

Duration of lifetime lactation is not associated with women's age at natural menopause after controlling for sociodemographic characteristics.



1168

Endometrial microbiota from endometrial cancer and paired pericancer tissues in postmenopausal women: differences and clinical relevance

Lili Wang, MD, Jiaolin Yang, MD, Huancheng Su, MD, Liuming Shi, MD, Bangtao Chen, MD, PhD, and Sanyuan Zhang, MD, PhD

This study indicates that endometrial cancer and adjacent endometrial cancer-unaffected endometrium in postmenopausal individuals have significantly different microbiota, and some observed bacteria are strongly clinically relevant to the tumor's biological behavior.



1176

Risk factors for future osteoporosis in perimenopausal Japanese women

Akiko Kanto, MD, Yasushi Kotani, MD, PhD, Kosuke Murakami, MD, Junko Tamaki, MD, PhD, Yuho Sato, PhD, Sadanobu Kagamimori, MD, PhD, Noriomi Matsumura, MD, PhD, and Masayuki Iki, MD, PhD

The present study identified cutoff values of BMD at the lumbar spine and femoral neck for predicting future osteoporosis at the time of perimenopause in Japanese women. In addition, obesity was associated with a greater loss of BMD about 10 years after perimenopause, consistent with the results of recent research.

1184

Serum uric acid levels and the risk of diabetes mellitus in premenopausal and postmenopausal women: the Suita study

Jiaqi Li, MPH, PhD, Ahmed Arafa, MD, PhD, Haytham A. Sheerah, MD, PhD, Masayuki Teramoto, MD, MPH, Yoko M. Nakao, MD, PhD, Kyoko Honda-Kohmo, MD, PhD, Rena Kashima, MD, Yukie Sakai, PhD, Emi Watanabe, PhD, Tomoharu Dohi, MD, PhD, and Yoshihiro Kokubo, MD, PhD

In this study serum uric acid levels were positively associated with the risk of diabetes mellitus in postmenopausal women. The highest quartile of serum uric acid levels contributed to a 19.1% (5.3-30.9%) population attributable risk of diabetes mellitus incidence in postmenopausal women, and 13.3% (-8.9-31.1%) in premenopausal women.

1189

Effects of health coaching on menopausal symptoms in postmenopausal and perimenopausal women

Alemeh Shokri-Ghadikolaei, MSc, Fatemeh Bakouei, PhD, Mouloud Agajani Delavar, PhD, Alireza Azizi, PhD, and Mahdi Sepidarkish, PhD

The results of this study suggest that health coaching could be a treatment option for improving menopausal symptoms, decreasing symptoms of depression, improving weight control, and increasing quality of life in postmenopausal and perimenopausal women.

1196

Association between equol production and metabolic syndrome in Japanese women in their 50s-60s

Atsushi Takahashi, MD, PhD, Masae Kokubun, MD, PhD, Yukio Anzai, MD, PhD, Atsuko Kogre, MD, PhD, Takashi Ogata, MD, PhD, Hiromichi Imaizumi, MD, Masashi Fujita, MD, Manabu Hayashi, MD, PhD, Kazumichi Abe, MD, PhD, and Hiromasa Ohira, MD, PhD

Equal production was associated with a lower prevalence of metabolic syndrome among women aged 50-69.

Brief Report



1200

Differing effects of oral conjugated equine estrogen and transdermal estradiol on vitamin D metabolism in postmenopausal women: a 4-year longitudinal study

Anna Maria Santoro, MS, Christine A. Simpson, MS, MT (ASCP), Elaine Cong, MD, Andrea Haas, MD, Rebecca R. Sullivan, MS, RD, Stephen Parziale, MS, Yanhong Deng, MPH, and Karl L. Insogna, MD

The findings of this study imply that there may be a short-term benefit to prescribing transdermal estradiol for women who are either vitamin D-deficient or vitamin D-insufficient.

Clinical Corner

Invited Review

1204

Immunization for midlife women

Vivien Brown, MDCM, CCFP, FCFP, NCMP

Immunization for midlife women is often neglected, leading to unnecessary morbidity and mortality in aging women. It is important for health care practitioners to recommend vaccines and provide education on vaccination guidelines and associated risks for women during menopause.

Review Articles



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Behavioral interventions for improving sleep outcomes in menopausal women: a systematic review and meta-analysis

Christine M. Lam, BSc, Leticia Hernandez-Galan, PhD, Lawrence Mbuagbaw, MD, MPH, PhD, Joycelyne Efua Ewusie, MSc, PhD, Lehana Thabane, MSc, PhD, and Alison K. Shea, MD, PhD, FRCSC, NCMP

This systematic review and meta-analysis found that the behavioral interventions of cognitive behavioral therapy, physical exercise, and mindfulness/relaxation therapy were associated with significant improvements in sleep outcomes among peri- and postmenopausal women.

1222

Physical activity on cardiorespiratory fitness and cardiovascular risk in premenopausal and postmenopausal women: a systematic review of randomized controlled trials

Maitane Ruiz-Rios, MS and Sara Maldonado-Martin, PhD

Based on the results of the systematic review, physical activity improves cardiorespiratory fitness and cardiovascular risk factors in women. Studies with differentiation in the menopausal state are needed to apply the results to clinical practice.

Letters to the Editor

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