Editorials

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Increasing vasomotor symptoms: did your great grandmother really not feel them?
Susan D. Reed, MD, MPH

1121
Short cycles: more menopause symptoms during transition
Robert A. Wild, MD, MPH, PhD

1123
A lifetime approach to disease manifestation
George Helmrich, MD, CCD

Original Studies

1124
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.
1137
Association between lower parity and low muscle mass in postmenopausal women: data from KNHANES (2010-2011)
So Hyun Ahn, MD, Heecyon Kim, MD, Hye In Kim, MD, Bo Hyon Yun, MD, PhD,
Hye Jung Shin, MS, Yun Ho Roh, MD, 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
cardiovascular 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-affected
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 Tanaki, 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, Kazunichi Abe, MD, PhD,
and Hiromasa Ohira, MD, PhD
Equol 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

1210
Behavioral interventions for improving sleep outcomes in menopausal women: a systematic review and meta-analysis
Christine M. Lam, BSc, Leticia Hernandez-Galan, PhD, Lawrence Mbuaghbaw, MD, MPH, PhD, Joyceleyne Efua Ewusie, MSc, PhD, Lehana Thabane, MSc, PhD, and Alison K. Shea, MD, PhD, FRCS, 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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