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## Menopause

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### **Editorials**

### 1229

Sodas and colas are associated with an increase in fractures John Christopher Gallagher, MD

### 1232

Menopause and high-intensity interval training: effects on body composition and physical performance

Fanny Buckinx, PhD, and Myléne Aubertin-Leheudre, PhD

### **Original Articles**

#### 1234

### Association between soft drink consumption and osteoporotic fractures among postmenopausal women: the Women's Health Initiative

Pedro A. Kremer, MD, MSC, MPH, Gail A. Laughlin, PhD, Aladdin H. Shadyab, PhD, Carolyn J. Crandall, MD, MS, FACP, Kamal Masaki, MD, Tonya Orchard, PhD, and Andrea Z. LaCroix, PhD

Main results show no associations between soft drink consumption and hip or lumbar spine t-scores, but significant associations were found over time between incidental hip fractures and high consumption levels of caffeinated and non-caffeinated soft drinks.

#### 1242 SDC

### Comparative effects of high-intensity interval training with combined training on physical function markers in obese postmenopausal women: a randomized controlled trial

Paulo R. P. Nunes, PhD, Fernanda M. Martins, MS, Aletéia P. Souza, MS, Marcelo A. S. Carneiro, MS, Rosekeila S. Nomelini, PhD, Márcia A. Michelin, PhD, Eddie F. C. Murta, PhD, Erick P. de Oliveira, PhD, and Fábio L. Orsatti, PhD Combined training and high-intensity interval training are efficient training modalities for improving physical function in obese postmenopausal women.

(continued)

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### **CONTENTS** *(continued)*



1250

#### Evidence map of ductal carcinoma in situ management options

Kathryn Bouskill, PhD, Susanne Hempel, PhD, Andrea Richardson, PhD, Patricia A. Ganz, MD, Sangita Baxi, MAS, Rushil Zutshi, MS, Jody Larkin, MS, Aneesa Motala, BA, Jeremy N. V. Miles, PhD, and Carolyn J. Crandall, MD *The evidence map provides an overview of ductal carcinoma in situ (DCIS) research showing the range of management options and remaining decisional dilemmas that follow a diagnosis of DCIS. It maps the evidence in accessible tools to guide practice and future research.* 

### **OPEN** 1259

### Early onset of action with a $17\beta$ -estradiol, softgel, vaginal insert for treating vulvar and vaginal atrophy and moderate to severe dyspareunia

Ginger Constantine, MD, Leah S. Millheiser, MD, Andrew M. Kaunitz, MD, Sharon J. Parish, MD, Shelli Graham, PhD, Brian Bernick, MD, and Sebastian Mirkin, MD

In the REJOICE trial, more than 70% of postmenopausal women with moderate to severe dyspareunia, associated with vulvar and vaginal atrophy, responded to treatment with the E2 softgel vaginal insert as early as week 2. A positive treatment response at week 2 also predicted a positive response at week 12.

#### 1265

### Early menarche is associated with an increased risk of type 2 diabetes in rural Chinese women and is partially mediated by BMI: the Henan Rural Cohort Study

Lulu Zhang, MD, Yuqian Li, MD, PhD, Chongjian Wang, MD, PhD, Zhenxing Mao, MD, PhD, Wen Zhou, MD, Zhongyan Tian, MD, Xiaokang Dong, MD, Haiqing Zhang, MD, Xiu Yang, MD, Mengying Fan, MD, and Linlin Li, MD, PhD *Early menarche increases the risk of type 2 diabetes mellitus, while later menarche decreases* 

the risk. The association appears to be partially mediated by body mass index.

### SDC 1272

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# Association between obesity type and obstructive coronary artery disease in stable symptomatic postmenopausal women: data from the KoRean wOmen'S chest pain rEgistry (KoROSE)

Jun Hwan Cho, MD, Hack-Lyoung Kim, MD, PhD, Myung-A Kim, MD, PhD, Sohee Oh, PhD, Mina Kim, MD, PhD, Seong Mi Park, MD, PhD, Hyun Ju Yoon, MD, PhD, Mi Seung Shin, MD, PhD, Kyung-Soon Hong, MD, PhD, Gil Ja Shin, MD, PhD, and Wan-Joo Shim, MD, PhD *Central obesity, but not overall obesity, is associated with obstructive coronary artery disease in postmenopausal women with stable chest pain.* 

### 1277

### OPEN SDC

### Improved periodontal disease and prevention of tooth loss in osteoporosis patients receiving once-yearly zoledronic acid: a randomized clinical trial

Akira Taguchi, DDS, PhD, Masataka Shiraki, MD, PhD, Satoshi Tanaka, BS, Hideyo Ohshige, BS, and Toshitaka Nakamura, MD, PhD

This randomized, clinical trial investigated whether zoledronic acid combined with oral health maintenance can improve periodontal disease associated with osteoporosis, thus reducing the risk of tooth loss. The results indicated that zoledronic acid effectively prevented symptomatic periodontal disease in osteoporosis patients who maintained good oral hygiene.

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### **CONTENTS** *(continued)*

#### 1284

### Association of bone mineral density with a first-degree family history of diabetes in normoglycemic postmenopausal women

Lijuan Yang, MD, Xiang Hu, MD, PhD, Hailing Zhang, MD, Wei Pan, MD, Weihui Yu, MD, PhD, and Xuejiang Gu, MD, PhD

Our study indicated that normoglycemic postmenopausal women with a first degree family history of diabetes (FHD) exhibit increased BMD with insulin resistance and hyperinsulinemia. A first degree FHD was an independent factor associated with elevated BMD in Chinese women after menopause.

### SDC 1289

### The histological microstructure and in vitro mechanical properties of pregnant and postmenopausal ewe perineal body

Petra Kochová, PhD, Lucie Hympánová, MD, PhD, Rita Rynkevic, PhD Student, Robert Cimrman, PhD, Zbyněk Tonar, MD, PhD, Jan Deprest, MD, PhD, and Vladimir Kalis, MD, PhD The perineal body of pregnant and postmenopausal ewes exhibited stability of structural and mechanical parameters. Pregnant ewes had a higher amount of skeletal muscle, higher Young's modulus of elasticity in the small deformation region, and a smaller amount of collagen when compared to postmenopausal ewes.

### 1302

### Lower circulating irisin in middle-aged and older adults with osteoporosis: a systematic review and meta-analysis

Kunyan Zhou, MD, Xiaoyong Qiao, MD, Yitong Cai, Ailin Li, BS, and Dan Shan, MD The findings of this analysis suggested that circulating irisin levels were decreased in middle-aged and elderly participants with osteoporosis. Irisin was positively correlated with bone mineral density.

### SDC 1311

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### Blood level of adiponectin is positively associated with lean mass in women without type 2 diabetes

Taylor H. Banh, PhD, Sarah E. Puchala, MS, RD, Rachel M. Cole, MS, RD, Rebecca R. Andridge, PhD, Janice K. Kiecolt-Glaser, PhD, and Martha A. Belury, PhD, RD *As women age, body composition tends to change where trunk adipose tissue mass increases and lean mass decreases. Blood adiponectin was positively associated with lean mass and negatively associated with trunk adipose mass in women without type 2 diabetes.* 

#### **Brief Report**

#### 1318

### Effects of perimenopausal transdermal estradiol on self-reported sleep, independent of its effect on vasomotor symptom bother and depressive symptoms

Paul J. Geiger, PhD, Tory Eisenlohr-Moul, PhD, Jennifer L. Gordon, PhD, David R. Rubinow, MD, and Susan S. Girdler, PhD

The present study found sleep parameters improved with hormone therapy (HT) after controlling for both changes in vasomotor symptoms bother and depressive symptoms, suggesting additional mechanisms by which HT improves sleep in the menopause transition.

#### **Clinical Corner**

#### NAMS Practice Pearl

### 1324

#### **Identification and management of urinary incontinence in midlife women** Linda Brubaker, MD

Urinary incontinence is common, stigmatizing, treatable, and rarely associated with undetected serious underlying etiologies. Clinicians can help affected women by improving skills in detection and implementing treatment strategies that are aligned with a woman's preferences and goals.

### **Review Articles**

1327



#### Lipid profile differences during menopause: a review with meta-analysis

Ananthan Ambikairajah, BSc, MTeach, PhDc, Erin Walsh, PhD, and Nicolas Cherbuin, PhD Lipoproteins were significantly higher in postmenopausal women compared to premenopausal women including triglycerides, total cholesterol, low-density lipoprotein and total cholesterol to high-density lipoprotein levels. There was no difference in high-density lipoprotein levels between premenopausal and postmenopausal women.

### SDC 1334

### A critical appraisal of vasomotor symptom assessment tools used in clinical trials evaluating hormone therapy compared to placebo

Marie K. Christakis, MD, FRCSC, NCMP, MPH, Donna M. Strobino, PhD, and Wen Shen, MD, MPH, FACOG

While oral hormone therapy improves vasomotor symptoms scores, there is a paucity of evidence on whether it improves Health-Related Quality of Life (HRQOL) in menopausal women. Future studies using validated, patient reported outcome measures that directly assess HRQOL are needed.

### SDC 1342

### Measurement properties of patient-reported outcome measures (PROMs) for women with genitourinary syndrome of menopause: a systematic review

Michaela Gabes, MSc, Helge Knüttel, PhD, Petra Stute, MD, and Christian J. Apfelbacher, PhD This systematic review tried to identify all patient-reported outcome measures existing for genitourinary syndrome of menopause and the quality of each patient-reported outcome measure was carefully and comprehensively assessed to provide recommendations for future clinical genitourinary syndrome of menopause trials.

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