

## Selección de Resúmenes de Menopausia

Semana del 22 a 28 de noviembre, 2023

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**J Alzheimers Dis. 2023 Nov 22. doi: 10.3233/JAD-230527. Online ahead of print. -22**

### Sex and Sleep Disruption as Contributing Factors in Alzheimer's Disease

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Alzheimer's disease (AD) affects more women than men, with women throughout the menopausal transition potentially being the most under researched and at-risk group. Sleep disruptions, which are an established risk factor for AD, increase in prevalence with normal aging and are exacerbated in women during menopause. Sex differences showing more disrupted sleep patterns and increased AD pathology in women and female animal models have been established in literature, with much emphasis placed on loss of circulating gonadal hormones with age. Interestingly, increases in gonadotropins such as follicle stimulating hormone are emerging to be a major contributor to AD pathogenesis and may also play a role in sleep disruption, perhaps in combination with other lesser studied hormones. Several sleep influencing regions of the brain appear to be affected early in AD progression and some may exhibit sexual dimorphisms that may contribute to increased sleep disruptions in women with age. Additionally, some of the most common sleep disorders, as well as multiple health conditions that impair sleep quality, are more prevalent and more severe in women. These conditions are often comorbid with AD and have bi-directional relationships that contribute synergistically to cognitive decline and neuropathology. The association during aging of increased sleep disruption and sleep disorders, dramatic hormonal changes during and after menopause, and increased AD pathology may be interacting and contributing factors that lead to the increased number of women living with AD.

**J Clin Med. 2023 Nov 13;12(22):7058. doi: 10.3390/jcm12227058.**

### Menopause Predisposes Women to Increased Risk of Cardiovascular Disease

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(1) Background: Menopause is an important event in women's lives, possibly contributing to the development of CVD, which is associated with changes in the cardiovascular risk profile, markers of metabolic health, and subclinical atherosclerosis. The aim of this study was to assess the association of menopause with CVD risk factors and subclinical markers of cardiometabolic disease. (2) Methods: The study involved 235 women from the general population at different stages of menopause. The methods used in this study were: diagnostic survey, anthropometric measurement (WC, height, BMI, WHtR), blood pressure measurement, biochemical analysis of venous blood (lipid profile, glucose, insulin, HbA1c), and CVD risk assessment (ASCVD Risk Calculator, POL-SCORE, SCORE-2). (3) Results: The vast majority of respondents had low cardiovascular risk, irrespective of the scale used for measuring the risk of CVD. The age at menopause was not an independent risk factor for CVD. In Model 1, the age at menopause and the time since menopause were found to be factors that increased CVD risk (OR = 1.186 and 1.267, respectively). In Models 2 and 3, the severity of menopausal symptoms was not a risk factor for CVD. Models 3 and 4 demonstrated that women with metabolic syndrome (MetS) were at a significantly higher risk of CVD. In model 5, the odds ratio of CVD with MetS as a standalone factor was 13.812. (4) Conclusions: Menopause predisposes women to an increased risk and MetS to a significantly higher risk of CVD.

**Biomedicines. 2023 Nov 14;11(11):3041. doi: 10.3390/biomedicines11113041.**

### The Menopausal Transition: Is the Hair Follicle "Going through Menopause"?

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This article explores the link between menopause and changes in the hair follicle (HF) lifecycle, focusing on hormonal and metabolic dynamics. During menopause, hormonal fluctuations and aging can impact the HF, leading to phenomena such as thinning, loss of volume, and changes in hair texture. These changes are primarily attributed to a decrease in estrogen levels. However, not all women experience significant hair changes during menopause, and the extent of transformations can vary considerably from person to person, influenced by genetic factors, stress, diet, and other elements. Furthermore, menopause mirrors the aging process, affecting metabolism and blood flow to the HFs, influencing the availability of vital nutrients. The article also discusses the key role of energy metabolism in the HF lifecycle and the effect of hormones, particularly estrogens, on metabolic efficiency. The concept of a possible

"menopause" clinically independent of menopause is introduced, related to changes in HF metabolism, emphasizing the importance of individual factors such as estrogen receptor responses, genetics, and last but not least, the microbiota in determining these dynamics.

**J Acad Nutr Diet. 2023 Nov 22:S2212-2672(23)01690-8. doi: 10.1016/j.jand.2023.11.012. Online ahead of print.**  
**Diet and Chronic Disease Research in the Women's Health Initiative**

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The Women's Health Initiative (WHI) has been a major contributor to diet and chronic disease research among postmenopausal U.S. women, over its 30+ year history (1993- present). The WHI program included full-scale randomized trials of a low-fat dietary pattern high in fruits, vegetables and grains, and of calcium and vitamin D supplementation, each with designated primary and secondary chronic disease outcomes. The history of these trials will be briefly reviewed here, along with principal findings that included evidence for breast cancer-related benefits for each of the two interventions. In recent years WHI investigators have developed an active research program in nutritional biomarker development and in the application of these biomarkers in WHI cohorts, among various other nutritional epidemiology uses of WHI observational study resources. The intake biomarker work, which primarily relies on blood and urine metabolomics profiles, lends support to the low-fat dietary pattern trial results, and supports chronic disease benefits of higher carbohydrate diets more generally, especially through the fiber component of carbohydrate.

**Curr Diab Rep. 2023 Nov 24. doi: 10.1007/s11892-023-01528-w. Online ahead of print.**

**Obesity and Severity of Menopausal Symptoms: a Contemporary Review**

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Purpose of review: Vasomotor symptoms are frequently experienced by women during menopause and have been linked to obesity. Severity of menopausal symptoms is a distinct construct from presence of symptoms, and the relation between severity of symptoms and obesity is less established. The purpose of this brief narrative review was to summarize evidence from recent studies on associations between menopausal symptom severity and measures of obesity. Recent findings: Sixteen articles were identified that specifically assessed and reported on the severity of menopausal symptoms in relation to measures of obesity including body mass index (BMI), waist circumference, and waist-to-hip ratio. Most studies to date show that greater BMI, waist size, and waist-to-hip ratio are associated with greater severity of menopausal symptoms. Given the large segment of women who will experience symptoms and that severity of symptoms influences treatment decisions, future studies are needed to determine how weight management efforts may reduce the severity of menopausal symptoms.

**Maturitas. 2023 Nov 2;180:107873. doi: 10.1016/j.maturitas.2023.107873. Online ahead of print.**

**Anxiety but not menopausal status influences the risk of long-COVID-19 syndrome in women living in Latin America**

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Objective: To study sociodemographic and clinical factors associated with the long-COVID-19 syndrome among women living in Latin American countries using undirected and directed methods. Method: We studied 347 patients with COVID-19 (confirmed by polymerase chain reaction) living in nine Latin American countries between May 2021 and July 2022, including 70 premenopausal, 48 perimenopausal, and 229 postmenopausal women. We compared the sociodemographic and general health information of women with (n = 164) and without (n = 183) the long-COVID-19 syndrome. They also completed the Connor-Davidson Resilience Scale, the Fear of COVID-19 Scale, the Jenkins Sleep Scale, and the Menopause Rating Scale to define the minimum set of variables for adjustment. We designed a directed acyclic graph (DAG) to identify factors related to the long-COVID-19 syndrome. Data were submitted to categorical logistic regression analyses. Results are reported as means and standard deviations or  $\beta$ -coefficients and 95 % confidence intervals. Results: Women with long-COVID-19 syndrome had a poor lifestyle, severe menopause symptoms, hypertension, insomnia, depression, anxiety, chronic diseases/conditions, risk of hospitalization, sleep disturbance, and low menopause-related quality of life compared to women without the syndrome. The DAG identified

the following long-COVID-19 covariates: age, obesity, anxiety, depression, cancer, lifestyle, smoking, and menstrual status. A multivariable logistic model with these covariates indicated that anxiety is the only factor to be significantly associated with long-COVID-19 syndrome, whereas other covariates were confounding factors. There was no significant influence of menopausal status on the long-COVID-19 syndrome. Conclusion: Among factors selected by the DAG, only anxiety was significantly associated with the long-COVID-19. There was no significant influence of the menopause status on the long-COVID-19 syndrome in the studied population.

**Eur J Endocrinol. 2023 Nov 8;189(5):527-536. doi: 10.1093/ejendo/lvad156.**

### **Associations between body composition and the risk of fracture according to bone mineral density in postmenopausal women: a population-based database cohort study**

Jeongmin Lee 1, Jin-Hyung Jung 2, Jinyoung Kim, Chaiho Jeong, Jeonghoon Ha, Min-Hee Kim, Jung-Min Lee, et al. Objective: We aimed to investigate the associations of body composition and the risk of fracture in postmenopausal women, stratified based on bone mineral density. Methods: A population-based cohort study using the database of the National Screening Program for Transitional Ages with women aged 66 years was performed. Bone mineral density was categorized as normal, osteopenia, and osteoporosis. The following body mass index (BMI) categories for general obesity were used: underweight (<18.5), normal (18.5-22.9), overweight (23-24.9), obese (25-29.9), and severely obese ( $\geq 30$  kg/m<sup>2</sup>). Waist circumference (WC) used for central obesity assessment was categorized into 5 groups. Newly diagnosed fracture during the follow-up period defined based on ICD-10 codes was the primary outcome. Results: During  $7.7 \pm 1.4$  years of follow-up, 41 672 (17.9%) participants experienced any fracture, 20 326 (8.7%) experienced vertebral fractures (VFs), and 2883 (1.2%) experienced hip fractures (HFs). The adjusted hazard ratios (aHRs) for any fracture showed a progressive increase with higher BMI and WC categories in individual with osteopenia and osteoporosis. Regarding VF, aHR was highest in severely obese individuals with osteoporosis (aHR [95% CI], 3.45 [2.99-3.97]) and in individuals with WC  $\geq 95$  cm with osteoporosis (4.79 [4.09-5.60]). The aHR [95% CI] for HF was highest in the underweight group with osteopenia (1.94 [1.16-3.27]) and osteoporosis (2.96 [2.15-4.10]). In central obesity individuals with WC  $\geq 95$  cm, aHR [95% CI] for HF was 2.80 [1.91-4.91]. Conclusions: General obesity and central obesity are not protective against any fracture, VF and HF in postmenopausal women with osteopenia or osteoporosis.

**Menopause. 2023 Nov 21. doi: 10.1097/GME.0000000000002278. Online ahead of print.**

### **Cardiometabolic outcomes in Kronos Early Estrogen Prevention Study continuation: 14-year follow-up of a hormone therapy trial**

Kejal Kantarci 1, Nirubol Tosakulwong 2, Timothy G Lesnick 2, Firat Kara 1, June Kendall-Thomas 1, et al. Objective: This study aimed to determine long-term cardiometabolic effects of hormone therapies initiated within 3 years of onset of menopause after a 14-year follow-up study of participants of the Kronos Early Estrogen Prevention Study (KEEPS). Methods: KEEPS was a multisite clinical trial that recruited recently menopausal women with good cardiovascular health for randomization to oral conjugated equine estrogens (Premarin, 0.45 mg/d) or transdermal 17 $\beta$ -estradiol (Climara, 50  $\mu$ g/d) both with micronized progesterone (Prometrium, 200 mg/d) for 12 d/mo, or placebo pills and patch for 4 years. KEEPS continuation recontacted KEEPS participants 14 years after randomization and 10 years after the completion of the 4-year clinical trial to attend in-person clinic visits. Results: Participants of KEEPS continuation (n = 299 of the 727 KEEPS participants; 41%) had an average age of 67 years (range, 58-73 y). Measurements of systolic and diastolic blood pressures, waist-to-hip ratio, fasting levels of glucose, insulin, lipid profiles, and homeostasis model assessment of insulin resistance were not different among the treatment groups at either KEEPS baseline or at KEEPS continuation visits, or for change between these two visits. The frequency of self-reported diabetes (P = 0.007) and use of diabetes medications was higher in the placebo than the oral conjugated equine estrogens (P = 0.045) or transdermal 17 $\beta$ -estradiol (P = 0.02) groups, but these differences were not supported by the laboratory measurements of glycemia or insulin resistance. Conclusions: There was no evidence of cardiovascular and/or metabolic benefits or adverse effects associated with 4 years use of oral or transdermal forms of hormone therapy by recently menopausal women with good cardiovascular health after 10 years.