

## Selección de Resúmenes de Menopausia

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### **Osteoporosis and sarcopenia are associated with each other and reduced IGF1 levels are a risk for both diseases in the very old elderly**

Ryosuke Hata 1, Kana Miyamoto 2, Yukiko Abe 3, Takashi Sasaki 3, Yuko Oguma 4, Takayuki Tajima 5, et al.

It is mandatory to manage musculoskeletal disorders in the elderly to prevent their becoming bed-ridden or requiring long-term care. However, the prevalence of musculoskeletal disorders such as osteoporosis and sarcopenia in otherwise healthy people over 85 years old is not completely known. Here we enrolled 1026 healthy subjects between 85 and 89 years old and evaluated them for the presence of osteoporosis, sarcopenia and fragility fracture(s), and how those conditions were related. We also evaluated biomarkers such as serum levels of insulin-like growth factor 1 (IGF1) and vitamin D status. The prevalence of osteoporosis, sarcopenia or fragility fracture(s) in these subjects was 22.4, 10.2 or 15.0 %, respectively. Serum IGF1 and 25(OH)D were significantly and negatively correlated with osteoporosis or sarcopenia. Osteoporosis and either sarcopenia or fragility fracture(s) were significantly related and shown to be risk factors for each other, even after adjustment for gender and BMI, while sarcopenia and fragility fracture(s) were not associated. Our data may provide a health platform for the very elderly and suggest strategies to prevent musculoskeletal disorders in this population.

**Medicine (Baltimore). 2022 Sep 30;101(39):e30920. doi: 10.1097/MD.00000000000030920.**

### **Association of follicle stimulating hormone and serum lipid profiles in postmenopausal women**

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The aim of the study was to observe the association between follicle stimulating hormone (FSH) levels and serum lipid profiles in postmenopausal women. A total of 411 healthy postmenopausal women with a mean age of 55 years (range 45-65 years) were enrolled in this study. Data on age, time of last menstrual period, past medical history, use of medications, and smoking status were collected, and body weight, height, and blood pressure were measured. Blood samples were collected to measure the serum concentrations of FSH, luteinizing hormone (LH), estradiol (E2), glucose, total cholesterol (TC), triglyceride (TG), high-density lipoprotein cholesterol (HDL-C), and low-density lipoprotein cholesterol (LDL-C) using routine methods. FSH levels were negatively associated with LDL-C, even after adjustment for age, LH, E2, BMI, systolic blood pressure (SBP), and diastolic blood pressure (DBP) (OR = 0.185, 95% CI = 0.051-0.669). Although FSH may also be negatively associated with dyslipidemia (P = .06 for trend) and hypercholesterolemia (P = .079 for trend), but no statistical significance was found after adjusting for confounding factors, particularly BMI. All relevant data are within the paper and its Supporting Information files. The results indicated that lower FSH levels might increase the odds of dyslipidemia, especially the risk of LDL-C elevation, which is an important factor that increases the risk of CVD in postmenopausal women.

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### **Association between testosterone levels and bone mineral density in females aged 40-60 years from NHANES 2011-2016**

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Growing evidence indicates that testosterone is a conspicuous marker for assessing male bone mineral density (BMD). However, research regarding testosterone levels and BMD is sparse and controversial for females. Hence, we aimed to investigate the association between testosterone levels and BMD among adult females aged 40-60 years in the United States. In this cross-sectional study, all participants were part of the National Health and Nutrition Examination Survey (2011-2016). A weighted general linear model was used to estimate the association between testosterone levels and lumbar BMD. Age, race, income level, education level, body mass index (BMI), blood urea nitrogen (BUN) level, serum uric acid (UA) level, serum calcium (Ca) level, serum phosphorus (P) level, the use of oral contraceptive pills,

the use of hormone replacement therapy (HRT), smoking status, drinking status, and the use of corticosteroids were adjusted using a weighted multiple regression model. Subgroup analyses were performed using the same regression model. We included 2198 female participants in the study, and testosterone levels were positively associated with lumbar BMD after adjusting for all the covariates ( $\beta = 1.12$ , 95% CI 0.31, 1.93). In subgroup analyses, the associations in the fourth quartile of testosterone levels were stronger for the participants aged 40-50 years old (quartile 4,  $\beta = 42.92$ , 95% CI 7.53, 78.30 vs. quartile 1) and 50 to 60-year-old (quartile 4,  $\beta = 32.41$ , 95% CI 0.14, 64.69 vs. quartile 1). Similar results were found in other subgroups, including subgroups for race (Non-Hispanic Black, Other), income level (income  $\leq 1.3$ , income  $> 3.5$ ), education level (college or higher), BMI  $> 25$  kg/m<sup>2</sup>, BUN levels  $\leq 20$  mg/dL, UA levels  $\leq 6$  mg/dL, Ca levels  $\leq 10.1$  mg/dL, P levels  $\leq 5$  mg/dL, drinking status, never smoker, never taking birth control pills, and HRT user. There was no interaction among the covariates in the association between lumbar BMD and testosterone levels (P for interaction  $> 0.05$ ). In US adult females aged 40-60 years, the testosterone level was a positive predictor of the lumbar BMD after adjusting for covariates.

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### **Impacts of menopause hormone therapy on mood disorders among postmenopausal women**

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**Objective:** This study aimed to explore the modulatory effects of menopause hormone therapy (MHT) on mood disorders among postmenopausal women. **Methods:** A cross-sectional study was conducted to recruit postmenopausal women, including patients (arranged MHT for over 3 years as the medication group) and non-MHT controls. All participants were asked to respond to the Center for Epidemiological Studies Depression Scale (CES-D) and Generalized Anxiety Disorder Screener (GAD-7) questionnaires to assess their depression and anxiety status. **Results:** A total of 230 cases from the two groups were determined based on propensity score matching analysis by matching the menopausal age and menopausal durations. We found that MHT served as a favorable modulator in the depression status of postmenopausal women. Among the four factors of the CES-D questionnaire, our data indicated that the differences between the two groups fell primarily into two aspects: depressive emotion, and somatic symptoms or retarded activities. MHT was mainly involved in improving the depression of overweight women. However, no substantial effects of MHT were observed on the regulation of anxiety. **Conclusion:** Postmenopausal women, especially the overweight population, who have experienced MHT exhibited an improved depressive status but not their anxiety condition.

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### **Brain fog in menopause: a health-care professional's guide for decision-making and counseling on cognition**

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Midlife women commonly experience changes in their cognitive function as they transition through menopause and express concern about whether these changes represent the initial stages of a more serious cognitive disorder. Health-care practitioners play an important role in counseling women on cognitive changes at midlife and normalizing women's experience. The aim of this commissioned International Menopause Society White Paper on cognition is to provide practitioners with an overview of data informing the clinical care of menopausal women and a framework for clinical counseling and decision-making. Among the topics presented are the specific cognitive changes occurring in menopause, the duration of such changes and their severity. The role of estrogen and menopause symptoms is reviewed. We present talking points for clinical counseling on the effects of hormone therapy on cognition and dementia risk in women, including discussion of absolute risk. Lastly, a brief review of modifiable risk factors for age-related cognitive decline and dementia is presented, with guidance for counseling patients on optimizing their brain health at midlife and beyond.

**J Sex Med. 2022 Sep 26;S1743-6095(22)01769-6. doi: 10.1016/j.jsxm.2022.08.191. Online ahead of print.**

## **Surgical Menopause and Bilateral Oophorectomy: Effect of Estrogen-Progesterone and Testosterone Replacement Therapy on Psychological Well-being and Sexual Functioning; A Systematic Literature Review**

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**Background:** Besides experiencing vasomotor symptoms, after surgical menopause and bilateral salpingo-oophorectomy (BSO), women experience moderate to severe psychological and sexual symptoms. **Aims:** To systematically review and meta-analyze the effect of systemic hormone replacement therapy (sHRT) on psychological well-being and sexual functioning in women after surgical menopause and BSO. **Methods:** Medline/Pubmed, EMBASE and PsychInfo were systematically searched until November 2021. Randomized controlled trials investigating the effect of sHRT on psychological well-being and/or sexual functioning in surgically menopausal women and women after BSO were eligible for inclusion. Two independent authors performed study selection, risk of bias assessment and data extraction. Standardized mean differences (SMDs) were calculated. **Outcomes:** Primary outcomes for psychological well-being were defined as overall psychological well-being, depression, and anxiety. Primary outcomes for sexual functioning were defined as overall sexual functioning, sexual desire, and sexual satisfaction. All outcomes were assessed on short ( $\leq 12$  weeks) or medium term (13-26 weeks). **Results:** Twelve studies were included. Estradiol had a beneficial effect on depressed mood on short term 3-6 years after surgery or 2 years (median) after surgery with high heterogeneity (SMD: -1.37, 95%CI: -2.38 to -0.37,  $P = .007$ ,  $I^2$  79%). Testosterone had a beneficial effect on overall sexual functioning on short to medium term 4.6 years (mean) after surgery (SMD 0.38, 95%CI 0.11-0.65,  $I^2$  0%) and on sexual desire on medium term at least 3-12 months after surgery (SMD 0.38, 95%CI 0.19-0.56,  $I^2$  54%). For most studies, risk of bias was uncertain. **Clinical implications:** Estradiol may beneficially affect psychological symptoms after surgical menopause or BSO and testosterone might improve sexual desire and overall sexual functioning. **Strengths and limitations:** This review only included patient-reported outcomes, thereby reflected perceived and not simply objective symptoms in surgically menopausal women and women after BSO. The small number of studies highly varied in nature and bias could not be excluded, therefore our results should be interpreted with great caution. **Conclusion:** Independent randomized controlled clinical trials investigating the effects of estrogen-progesterone and testosterone on psychological and sexual symptoms after surgical menopause are needed.