Selección de Resúmenes de Menopausia

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Exploring associations between testosterone and cardiovascular disease in females: A systematic review

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There are increasingly recognised yet modestly understood sex-based differences in cardiovascular physiology, implicating endogenous sex hormones in cardiovascular disease aetiology. However, the role of androgens in female cardiovascular disease risk remains unclear. Therefore, this systematic review examined associations between endogenous testosterone concentrations and cardiovascular disease in females. MEDLINE complete, Embase and CINAHL complete were searched from 2000 to September 2025. Articles that investigated the association between endogenous plasma testosterone and cardiovascular disease in female adults were included. Quality assessment was performed using the QUALSYST tool. Of the 445 articles that underwent full-text screening, 28 met the inclusion criteria (n = 598,440), most (75%) of which had a low risk of bias. Findings for incident cardiovascular disease outcomes were inconsistent or absent. Substantial and systematic methodological heterogeneity across the evidence base precluded meta-analyses; only 10 of the 28 studies (35.7%) quantified testosterone using gold-standard liquid chromatography-mass spectrometry, only seven (25%) excluded exogenous hormone (menopause hormone therapy or oral contraceptive) users, and disease definitions, exposure metrics (total, free, bioavailable, free androgen index) and statistical models varied widely. This review highlights substantial methodological heterogeneity throughout the evidence base. We provide four addressable areas which require resolution before definitive conclusions regarding the association between testosterone and cardiovascular disease in females can be made.

Cancer Causes Control. 2026 Oct 30;37(11):186. doi: 10.1007/s10552-026-02264-8.

Cigarette smoking and circulating androgens in women from the Epic Florence cohort

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Purpose: The harmful effects of smoking on health include respiratory and cardiovascular diseases, adverse reproductive outcomes, and an increased risk of several cancers, including breast cancer. While the effect of circulating estrogens on breast cancer development is well established, recent studies suggest androgen involvement, but little is known about lifestyle factors influencing their levels. We investigated the relationship between smoking habits and circulating androgen levels in pre- and postmenopausal women. Methods: We conducted a cross-sectional study on 867 women randomly selected from participants enrolled in the EPIC Florence study between 1993 and 1998. At enrollment, participants provided data on diet, lifestyle, reproductive history, and anthropometry. Blood samples were collected, aliquoted, and stored in liquid nitrogen. To assess the association between active smoking and circulating androgens, we used linear regression models adjusted for age, body mass index, waist circumference, education level, physical activity level, alcohol consumption, caloric intake, and reproductive history, separately for pre- and postmenopausal women. Results: In pre- and postmenopausal women, current smokers had higher testosterone (premenopause: exp(β) 1.13; 95% CI 1.01-1.26 and postmenopause: exp(β) 1.13; 95% CI 1.00-0.26) and androstenedione levels (premenopause: exp(β) 1.14; 95% CI 1.04-1.26 and postmenopause: exp(β) 1.14; 95% CI 1.02-1.28) compared to never smokers. A significant trend toward increasing androstenedione with increasing pack-years of smoking was observed in postmenopausal women. Conclusions: Our analysis revealed a direct association between circulating levels of testosterone and androstenedione and smoking habit, and a dose-response effect for androstenedione in postmenopausal women. This association could provide insights into the mechanisms linking smoking to breast cancer risk.

Gynecol Endocrinol. 2026 Dec 31;42(1):2752665. doi: 10.1080/09513590.2026.2752665. Epub 2026 Oct 28.

Beyond reproduction: the emerging role of FSH in postmenopausal aging

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Follicle-stimulating hormone (FSH) is traditionally regarded as a biochemical marker of menopause and declining ovarian function. However, emerging evidence suggests that its role may extend beyond reproductive physiology. During the menopause transition, FSH concentrations rise progressively, initially due to declining inhibin B and later to loss of ovarian estradiol and inhibin production. Evidence of FSH effects in bone, adipose tissue, the cardiovascular system and brain has raised the possibility of broader physiological actions. Higher FSH levels have been associated with bone loss and hip fracture risk, adverse cardiometabolic and vascular changes, and cognitive decline and Alzheimer's disease. Although these associations do not establish causality, they suggest that FSH may contribute to some consequences of reproductive aging rather than simply reflect ovarian failure. Experimental studies indicate that reducing FSH may benefit bone and adiposity, while preliminary clinical evidence regarding cognition remains inconclusive. Thus, FSH may represent not only a marker of menopause, but also a potential marker of risk and, ultimately, a therapeutic target.

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National trends in menopausal hormone therapy use in Denmark, 1999-2025

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We describe trends in the use of menopausal hormone therapy in Denmark, using data on medication sales from all pharmacies, from 1999 to 2025. Between 2001 and 2013, the proportion of females aged 45-64 who purchased systemically-acting menopausal hormone therapies fell from 20% to 4%. After a decade of consistently low use, purchasing of systemically-acting therapies increased in 2024 and was 8% in 2025. Purchasing of locally-acting (i.e., vaginal) therapies increased throughout the study period, from 5% to 11%. We expect these upward trends to continue in response to growing interest as well as guidelines aimed at supporting decision-making.

Medicina (Kaunas). 2026 Oct 21;62(10):2043. doi: 10.3390/medicina62102043.

The Interplay Between Oophorectomy and Alzheimer's Disease: A Narrative Review

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Alzheimer's disease (AD) is the leading cause of dementia worldwide and affects women more frequently than men. Although age remains the main risk factor, reproductive aging and changes in ovarian hormone exposure may also contribute to this difference. Premenopausal bilateral oophorectomy causes an abrupt loss of ovarian hormones, including estradiol, progesterone, and testosterone, and several observational studies have associated this change with a higher risk of later cognitive impairment or dementia, particularly when surgery is performed at a younger age. However, these studies have assessed different outcomes, including dementia, mild cognitive impairment, subjective cognitive changes, and AD-related imaging findings, and current evidence does not establish a direct causal relationship between oophorectomy and AD. Possible biological pathways include neuroinflammation, synaptic dysfunction, amyloid-β and tau-related changes, and cerebrovascular dysfunction, although much of the mechanistic evidence remains experimental or indirect. Genetic background, vascular health, age at surgery, and the duration of hormone deprivation may further influence individual risk. Hormone replacement therapy has an established role in the management of premature or early surgical menopause when there is no contraindication, but its effect on long-term AD prevention remains uncertain; the timing of treatment may be important, but current evidence does not confirm a preventive effect. This review summarizes current epidemiological, neuroimaging, and experimental evidence linking oophorectomy with cognitive health and AD, and discusses hormone therapy, pharmacological and non-pharmacological management, emerging research approaches, and remaining knowledge gaps. Future studies with detailed information on surgical timing, hormone exposure, genetic risk, vascular factors, longitudinal cognition, and AD-related biomarkers are needed to better define which women may be most vulnerable after premenopausal oophorectomy.

J Clin Med. 2026 Oct 12;15(20):7844. doi: 10.3390/jcm15207844.

Association Between Breast Arterial Calcification on Mammography and Carotid Artery Stenosis on CT Angiography: A Retrospective Study in a Selected Cohort of Women Aged 60-65 Years

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Background/Objectives: Breast arterial calcification (BAC) is an incidental mammographic finding that may be associated with systemic vascular disease. We investigated the association between mammographic BAC and carotid artery stenosis on cervical computed tomography angiography (CTA) in a clinically selected cohort of postmenopausal women aged 60-65 years. Methods: This retrospective, single-center study screened 3421 women aged 60-65 years who underwent both mammography and cervical CTA between November 2021 and May 2025. CTA examinations requested from the emergency department or cardiology clinics, examinations not performed within the same calendar year, and prespecified clinical exclusions were removed, leaving 180 women who underwent outpatient CTA for nonspecific symptoms. The median interval between examinations was 131 days. BAC was graded on a 0-3 scale, and carotid stenosis was assessed according to the North American Symptomatic Carotid Endarterectomy Trial (NASCET) criteria, using the greater degree of stenosis on either side as the patient-level value. BAC was analyzed as an ordinal variable, as a categorical variable, and using binary definitions of presence and severity. Multivariable models were adjusted for age, diabetes mellitus, hyperlipidemia, hypertension, and smoking. Results: Clinically significant stenosis (≥50%) was present in 44 women (24.4%). Its prevalence increased from 5.4% in BAC grade 0 to 75.0% in grade 3 (p for trend < 0.001). Each one-grade increase in BAC was associated with clinically significant stenosis (adjusted odds ratio [aOR], 4.23; 95% confidence interval [CI], 2.50-8.03; p < 0.001). The corresponding aORs were 16.70 (95% CI, 4.99-73.27) for any BAC and 18.49 (95% CI, 5.93-70.46) for BAC grade ≥2. Adding BAC to the clinical model increased the area under the receiver operating characteristic curve (AUC) from 0.90 to 0.96 (DeLong p = 0.005); the optimism-corrected AUC was 0.95. Inter-reader agreement for BAC grading was substantial (weighted κ = 0.79). Conclusions: In this selected cohort of women aged 60-65 years who underwent clinically indicated CTA, BAC was associated with carotid artery stenosis independently of conventional cardiovascular risk factors. These findings do not establish BAC as a screening or prediction tool and require prospective, population-based validation.

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Factors associated with receipt of prescription medication for menopause-related symptoms

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Objective: To evaluate the association of patient- and clinician-level factors and receipt of prescription medication for menopause-related symptoms in a large academic health care system. Methods: We conducted a retrospective cohort study of women aged 40-55 years seeking care for menopause-related symptoms in any outpatient encounter with family medicine, internal medicine, endocrinology, and OB/Gyn from 2016 to 2023. Prescriptions associated with menopause-related ICD-10 diagnoses were extracted. Bivariate and multivariable logistic regression were used to evaluate the association of patient- and clinician-level characteristics and receipt of prescription treatment. Results: We identified 5,491 women with an outpatient encounter with an associated ICD-10 code for menopause-related symptoms. Relative to White women, Black women were less likely to receive any prescription treatment for menopause-related symptoms (OR: 0.79, 95% CI: 0.67-0.95), including systemic estrogen (OR: 0.64, 95% CI: 0.47-0.87); however, were more likely to receive SSRIs (OR: 1.49, 95% CI: 1.04-2.14). Relative to patients seeking care within OB/Gyn settings, patients were less likely to be prescribed any treatment by internal medicine (OR: 0.45, 95% CI: 0.36-0.56), family medicine (OR: 0.52, 95% CI: 0.14-0.40), and endocrinology clinicians (OR: 0.23, 95% CI: 0.14-0.40). Conclusion: Our study demonstrates differential prescribing patterns for menopause-related symptoms with respect to race, insurance status, and clinician specialty. Our results underscore the need for equitable care for women experiencing menopause symptoms.

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Longitudinal Analysis of Skeletal Muscle and Cardiometabolic Risk During the Menopause Transition

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We assessed longitudinal changes in body composition and cardiometabolic risk in those with normal-weight and overweight/obese women across the menopausal transition. We examined a 10-year longitudinal analysis of 81 healthy women in the prospective Healthy Transitions cohort. Body composition measures were obtained via dual-energy X-ray absorptiometry. Skeletal muscle was estimated using a validated prediction model: 1.12 × appendicular lean mass- 0.63. Serum sex steroid hormones and cardiometabolic factors were quantified in fasting blood. Participants were stratified by BMI into normal weight (n=41) and overweight/obesity (n=40) groups. Changes within and between BMI groups across the menopause transition were assessed with linear mixed models. At menopause onset, compared to those with normal

weight, participants with overweight/obesity had lower sex hormone-binding globulin (-30.9±10.3 nmol/L; p=0.01), greater percent body fat (13.1±1.3%; p<0.001), greater skeletal muscle mass (2.5±0.6 kg; p<0.001), and worse cardiometabolic risk factors (p<0.001). In the 5 years before menopause, participants with overweight/obesity gained skeletal muscle (+1.2 kg) and fat mass (+3.5 kg), while participants with normal weight increased percent body fat (+1.5%) only. At menopause onset, women with overweight/obesity exhibit distinct alterations in body composition, hormonal profiles, and cardiometabolic risk that exist in the years preceding menopause, highlighting the importance of early, targeted interventions to mitigate adverse health trajectories during the menopause transition.