



## Selección de Resúmenes de Menopausia

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### **A new look at the theoretical causes of endometriosis: Narrative review**

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Endometriosis is a major health concern in women who have it. Unfortunately, there is no definitive cure except panhysterectomy with its sequelae including induction of premature menopause due to loss of ovaries. Therefore, revealing the causes of this puzzling disease is necessary to avoid contracting it, and to spare women the health disorders resulting from it and the difficulties of treating it. We aimed to study endometriosis with a focus on its theoretical causes. Its classification reports and theories of pathogenesis were identified and studied from available database searches. The causes of endometriosis remain mysterious. Many theories have been proposed to explain the etiology, but retrograde menstruation (RM) remains the closest in this regard. Although this theory is the most accepted in the pathogenesis of endometriosis, its causes are still a matter of debate, especially in women who do not suffer from obstructions to menstrual outflows, such as cases of congenital cervical stenosis and imperforate hymen. It is suggested in some studies that there may be a relationship between women who engage in sexual activity during menstruation and the development of endometriosis. It is concluded that endometriosis is a painful and debilitating disease. Identifying its causes is essential to control the disease and avoid any burdens on health. RM is the main theory for its pathogenesis but its causes are still uncertain. Sexual activity during menstruation may be a possible cause of RM but needs more evidence. Future studies are recommended to reveal all aspects of the pathogenesis of endometriosis.

**Maturitas. 2024 Jul 14;188:108066. doi: 10.1016/j.maturitas.2024.108066. Online ahead of print.**

### **Running on empty: Exploring stem cell exhaustion in geriatric musculoskeletal disease**

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Ageing populations globally are associated with increased musculoskeletal disease, including osteoporosis and sarcopenia. These conditions place a significant burden of disease on the individual, society and the economy. To address this, we need to understand the underpinning biological changes, including stem cell exhaustion, which plays a key role in the ageing of the musculoskeletal system. This review of the recent evidence provides an overview of the associated biological processes. The review utilised the PubMed/Medline, Science Direct, and Google Scholar databases. Mechanisms of ageing identified involve a reaction to the chronic inflammation and oxidative stress associated with ageing, resulting in progenitor cell senescence and adipogenic differentiation, leading to decreased mass and quality of both bone and muscle tissue. Although the mechanisms underpinning stem cell exhaustion are unclear, it remains a promising avenue through which to identify new strategies for prevention, detection and management.

**Mol Cell Biochem. 2024 Aug 1. doi: 10.1007/s11010-024-05071-4. Online ahead of print.**

### **The role of estrogen in Alzheimer's disease pathogenesis and therapeutic potential in women**

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Estrogens are pivotal regulators of brain function throughout the lifespan, exerting profound effects from early embryonic development to aging. Extensive experimental evidence underscores the multifaceted protective roles of estrogens on neurons and neurotransmitter systems, particularly in the context of Alzheimer's disease (AD) pathogenesis. Studies have consistently revealed a greater risk of AD development in women compared to men, with postmenopausal women exhibiting heightened susceptibility. This connection between sex factors and long-term estrogen deprivation highlights the significance of estrogen signaling in AD progression. Estrogen's influence extends

to key processes implicated in AD, including amyloid precursor protein (APP) processing and neuronal health maintenance mediated by brain-derived neurotrophic factor (BDNF). Reduced BDNF expression, often observed in AD, underscores estrogen's role in preserving neuronal integrity. Notably, hormone replacement therapy (HRT) has emerged as a sex-specific and time-dependent strategy for primary cardiovascular disease (CVD) prevention, offering an excellent risk profile against aging-related disorders like AD. Evidence suggests that HRT may mitigate AD onset and progression in postmenopausal women, further emphasizing the importance of estrogen signaling in AD pathophysiology. This review comprehensively examines the physiological and pathological changes associated with estrogen in AD, elucidating the therapeutic potential of estrogen-based interventions such as HRT. By synthesizing current knowledge, it aims to provide insights into the intricate interplay between estrogen signaling and AD pathogenesis, thereby informing future research directions and therapeutic strategies for this debilitating neurodegenerative disorder.

**Front Endocrinol (Lausanne). 2024 Jul 17;15:1414968. doi: 10.3389/fendo.2024.1414968. eCollection 2024.**

## **The risk of ovarian cancer in hormone replacement therapy users: a systematic review and meta-analysis**

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**Background:** With the increasing use of hormone replacement therapy (HRT), there is a need to understand its impact on the occurrence of female malignant tumors. This systematic review and meta-analysis aimed to assess the risk of ovarian cancer associated with HRT and its related risk factors. **Methods:** PUBMED, OVID, Embase, Cochrane, and Web of Science were searched from 1980 to April 2022 to identify studies on the risk of ovarian cancer and hormone replacement therapy. The random-effects model was used to estimate the pooled risk of HRT in ovarian cancer, both in cohort studies and case-control studies. Additionally, the analysis examined the outcomes associated with different types of estrogen plus progesterone regimens. Meta-regression and sensitive analysis were performed to evaluate the heterogeneity. **Results:** 21 cohort studies (involving 15,313 cases and 4,564,785 participants) and 30 case-control studies (including 18,738 cases and 57,747 controls) were analyzed. The pooled risks of ovarian cancer for HRT users were 1.20 (95% confidence interval [CI] 1.01-1.44) from cohort studies and 1.13 (95% CI 1.04-1.22) from case-control studies. However, after restricting the study period to recent decades, the significant results indicating a higher risk disappeared in cohort studies conducted after 2010 and in case-control studies conducted after 2006. Furthermore, the continuous use of estrogen-progesterone replacement therapy (EPRT) was associated with a risk comparable to that of sequential use. Subgroup analysis showed that both estrogen replacement treatment (ERT) and EPRT had minor risks; The risk further increased with prolonged exposure time, particularly for durations exceeding 10 years. Additionally, serous ovarian cancer appeared to be more susceptible than other pathological types. **Conclusion:** The risk of ovarian cancer associated with HRT has been decreasing over time. However, ERT may increase this risk, particularly when used for an extended period. It is recommended that long-time users consider continuous EPRT as a safer alternative.

**Menopause. 2024 Jul 30. doi: 10.1097/GME.0000000000002396. Online ahead of print.**

## **From maca to marijuana: cultural influences on joint pain symptoms and management in urban perimenopausal and early postmenopausal Latinas**

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**Objective:** The purpose of this qualitative study was to explore the symptom experience and coping strategies for managing joint pain during the menopause transition in urban Latina women. **Methods:** We conducted focus groups with 13 English-speaking peri and early postmenopausal Latinas living in Upper Manhattan in New York City in 2014. Eligible participants were self-identified Latinas aged 45 to 60 years with new onset or worsening joint pain and spontaneous amenorrhea, recruited through flyers and snowball sampling. Focus group interviews conducted in English were audiotaped, transcribed, and analyzed by a bilingual research team, using NVivo software (QSR International) to organize and code themes. **Results:** On average, participants were aged  $51.7 \pm 4.8$  years and overweight (body mass index of  $29.3 \pm 6.7$  kg/m<sup>2</sup>); 10 (76.9%) were Puerto Rican, and the last menstrual period was 1 month to 5 years ago. The following four themes emerged: 1) menopause and joint pain are an alarming package; 2) pain disrupts life and livelihood; 3) medical management is unsatisfactory and raises worries about addiction; and 4) home remedies for coping with pain-from maca to marijuana. Despite access to a world-class medical facility in their neighborhood, women seeking pain relief preferred to self-manage joint pain with exercise, over-the-counter products, and other culturally valued home remedies. Many suffered through it. **Conclusions:** For midlife Latinas, joint pain symptoms may emerge or worsen unexpectedly as part of the menopause transition and carry distressing consequences

for daily activities and quality of life. There is a need to develop more culturally specific approaches for menopause-related pain management in this underserved population.

**Climacteric. 2024 Jul 30;1-7. doi: 10.1080/13697137.2024.2380363. Online ahead of print.**

## **The musculoskeletal syndrome of menopause**

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Fifty-one percent of humans are born with ovaries. As the ovarian production of estrogen diminishes in midlife and ultimately stops, it is estimated that more than 47 million women worldwide enter the menopause transition annually. More than 70% will experience musculoskeletal symptoms and 25% will be disabled by them through the transition from perimenopause to postmenopause. This often-unrecognized collective of musculoskeletal symptoms, largely influenced by estrogen flux, includes arthralgia, loss of muscle mass, loss of bone density and progression of osteoarthritis, among others. In isolation, it can be difficult for clinicians and patients to adequately appreciate the substantial role of decreasing estrogen, anticipate the onset of related symptoms and actively treat to mitigate future detrimental processes. Thus, in this review we introduce a new term, the musculoskeletal syndrome of menopause, to describe the collective musculoskeletal signs and symptoms associated with the loss of estrogen. Given the significant effects of these processes on quality of life and the associated personal and financial costs, it is important for clinicians and the women they care for to be aware of this terminology and the constellation of musculoskeletal processes for which proper risk assessment and prophylactic management are of consequence.

**Rev Cardiovasc Med. 2023 Jul 4;24(7):193. doi: 10.31083/j.rcm2407193. eCollection 2023 Jul.**

## **Cardiovascular Events Among Women with Premature Ovarian Insufficiency: A Systematic Review and Meta-Analysis**

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**Background:** It is well documented that menopause is linked to an increased risk of cardiovascular (CV) events; however, the results of studies focusing on the association between premature ovarian insufficiency (POI) and the risk of CV events are controversial. The aim of this systematic review and meta-analysis was to assess the risk of CV events among women with POI compared to women with menopausal aged 50-54 years. **Methods:** A systematic literature search of PubMed (including Medline), Scopus, and Web of Science was conducted from 1990 to 2022 to retrieve observational studies published in English-language. The studies' quality was assessed using structured standard tools. **Primary-outcome** was the pooled risk of the composite outcome of CV events. **Results:** We included 16 studies involving 40,549 women who suffered from POI and 1,016,633 women as controls. After adjustment for hormone therapy, the pooled risk of composite outcome of CV events and coronary heart disease, among women with the POI was significantly 1.3 (Pooled-adjusted hazard ratio (HR) = 1.35, 95% CI: 1.06-1.63) and 1.4 (Pooled adjusted HR = 1.42, 95% CI: 1.17-1.66) fold higher than women with menopausal age 50-54 years. There was no difference between the groups regarding the risk of stroke and death due to CV events between two groups. There was not sufficient data for pooled analysis of other specific CV events. **Conclusions:** In conclusion, POI is associated with an increased risk of CV events, particularly coronary heart disease. Our findings extend prior work with data supporting POI as a risk-enhancing factor for CV events. However, more studies are needed to confirmed these findings.