



Selección de Resúmenes de Menopausia

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Obesity and sexual health: focus on postmenopausal women

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Menopause is a cardiometabolic transition with many women experiencing weight gain and redistribution of body fat. Hormonal changes may affect also several dimensions of well-being, including sexual function, with a high rate of female sexual dysfunction (FSD), which displays a multifactorial etiology. The most important biological factors range from chronic low-grade inflammation, associated with hypertrophic adipocytes that may translate into endothelial dysfunction and compromised blood flow through the genitourinary system, to insulin resistance and other neuroendocrine mechanisms targeting the sexual response. Psychosocial factors include poor body image, mood disorders, low self-esteem and life satisfaction, as well as partner's health and quality of relationship, and social stigma. Even unhealthy lifestyle, chronic conditions and putative weight-promoting medications may play a role. The aim of the present narrative review is to update and summarize the state of the art on the link between obesity and FSD in postmenopausal women, pointing to the paucity of high-quality studies and the need for further research with validated end points to assess both biomarkers of obesity and FSD. In addition, we provide general information on the diagnosis and treatment of FSD at menopause with a focus on dietary interventions, physical activity, anti-obesity drugs and bariatric surgery.

Lancet Rheumatol. 2023 Apr;5(4):e225-e238. doi: 10.1016/S2665-9913(23)00060-7.

The influence of sex hormones on musculoskeletal pain and osteoarthritis

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The association of female sex with certain rheumatic symptoms and diseases is now indisputable. Some of the most striking examples of this association occur in individuals with musculoskeletal pain and osteoarthritis, in whom sex-dependent changes in incidence and prevalence of disease are seen throughout the lifecourse. Joint and muscle pain are some of the most common symptoms of menopause, and there is increasingly compelling evidence that changes in or loss of sex hormones (be it natural, autoimmune, pharmacological, or surgical) influence musculoskeletal pain propensity and perhaps disease. However, the effects of modulation or replacement of sex hormones in this context are far less established, particularly whether these approaches could represent a preventative or therapeutic opportunity once symptoms have developed. In this Review, we present evidence for the association of changes in sex hormones with musculoskeletal pain and painful osteoarthritis, discussing data from diverse natural, therapeutic, and experimental settings in humans and relevant animal models relating to hormone loss or replacement and the consequent effects on health, pain, and disease. We also postulate mechanisms by which sex hormones could mediate these effects. Further research is needed; however, increased scientific understanding of this complex area could lead to real benefits in musculoskeletal and women's health.

Front Endocrinol (Lausanne). 2024 Jan 3:14:1287972. doi: 10.3389/fendo.2023.1287972. eCollection 2023.

Mechanism and physical activities in bone-skeletal muscle crosstalk

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Bone and skeletal muscle work in coordination to maintain the function of the musculoskeletal system, in which skeletal muscle contraction drives the movement of the bone lever system while bone provides insert sites for skeletal muscle through the bone-muscle junction. Existing evidence suggests that factors secreted by skeletal muscle and bone mediate the interaction between the two tissues. Herein, we focused on the relationship between skeletal muscle and bone and the underlying mechanism of the interaction. Exercise can promote bone strength and secrete osteocalcin and insulin-like growth factor I into the blood, thus improving muscle quality. In addition, exercise can also promote myostatin, interleukin-6, Irisin, and apelin in muscles to enter the blood so that they can act on bones to maintain the balance between bone absorption and bone formation. There is a special regulatory axis interleukin-6/osteocalcin between myokines and osteokines, which is mainly influenced by exercise. Therefore, we pay attention to the important factors in the bone-muscle intersection that are affected by exercise, which were found or their functions were

expanded, which strengthened the connection between organs of the whole body, highlighting the importance of exercise and contributing to the diagnosis, prevention, and treatment of osteoporosis and sarcopenia in the clinic.

Hormones (Athens). 2024 Jan 18. doi: 10.1007/s42000-024-00526-1. Online ahead of print.

Antiosteoporosis therapy after discontinuation of menopausal hormone therapy: a systematic review

Panagiotis Anagnostis 1, Efstathios Divaris 2, Julia K Bosdou 3, Symeon Tournis 4, Konstantinos Stathopoulos et al. Objective: Menopausal hormone therapy (MHT) has consistently shown a bone protective effect by reducing the risk of vertebral, non-vertebral, and hip fractures in postmenopausal women regardless of baseline fracture risk. However, the optimal sequential treatment after MHT discontinuation has not been determined. This systematic review aimed to obtain the best evidence regarding the effect of antiresorptive or osteoanabolic treatment on bone mineral density (BMD) and/or fracture risk following MHT. Methods: A comprehensive search was conducted in the PubMed, Scopus, and Cochrane databases up to October 31, 2023. Randomized-controlled trials (RCTs) and observational studies conducted in postmenopausal women were included. Results: After the exclusion of duplicates, 717 studies were identified. Two were eligible for qualitative analysis, one RCT and one retrospective cohort study. The RCT showed that alendronate 10 mg/day for 12 months further increased lumbar spine (LS) BMD by 2.3% following MHT and maintained femoral neck (FN) BMD in postmenopausal women (n = 144). It also decreased bone anabolic and resorption markers by 47 and 36%, respectively. In the retrospective study (n = 34), raloxifene 60 mg/day increased both LS and FN BMD at 12 months by 3 and 2.9%, respectively. No fractures were reported. Conclusions: Antiresorptive therapy with either a bisphosphonate (i.e., alendronate) or raloxifene could be considered a sequential antiosteoporosis therapy after MHT withdrawal since they have been shown in studies to further increase BMD. However, no safe conclusions can be drawn from the existing literature.

BMC Pediatr. 2024 Jan 17;24(1):53. doi: 10.1186/s12887-024-04539-y.

Dairy product consumption, eating habits, sedentary behaviour and physical activity association with bone mineral density among adolescent boys: a cross-sectional observational study

Anna Kopiczko 1, Michał Czaplą 2 3 4, Raúl Juárez-Vela 5, Catherine Ross 6, Bartosz Uchmanowicz 7 Background: During childhood and adolescence, skeletal microarchitecture and bone mineral density (BMD) undergo significant changes. Peak bone mass is built and its level significantly affects the condition of bones in later years of life. Understanding the modifiable factors that improve bone parameters at an early age is necessary to early prevent osteoporosis. To identify these modifiable factors we analysed the relationship between dairy product consumption, eating habits, sedentary behaviour, and level of physical activity with BMD in 115 young boys (14-17 years). Methods: Bone parameters were measured by dual energy x-ray absorptiometry using paediatric specific software to compile the data. Dairy product consumption and eating habits were assessed by means of a dietary interview. Sedentary behaviour and physical activity was assessed in a face-to-face interview conducted using the International Physical Activity Questionnaire. Data collection on total physical activity level was performed by collecting information on the number of days and the duration of vigorous and moderate intensity (MVPA) and average daily time spent in sitting (SIT time). Results: The strongest relationships with BMD in distal part of forearm were found for moderate plus vigorous activity, sit time, and intake of dairy products, intake of calcium, protein, vitamin D, phosphorus from diet. Relationships between BMD, bone mineral content (BMC) in the distal and proximal part of the forearm and PA, sit time and eating parameters were evaluated using the multiple forward stepwise regression. The presented model explained 48-67% (adjusted R² = 0.48-0.67; p < 0.001) of the variance in bone parameters. The predictor of interactions of three variables: protein intake (g/person/day), vitamin D intake (µg/day) and phosphorus intake (mg/day) was significant for BMD dis (adjusted R² = 0.59; p < 0.001). The predictor of interactions of two variables: SIT time (h/day) and dairy products (n/day) was significant for BMD prox (adjusted R² = 0.48; p < 0.001). Furthermore, the predictor of interactions dairy products (n/day), protein intake (g/person/day) and phosphorus intake (mg/day) was significant for BMC prox and dis (adjusted R² = 0.63-0.67; p < 0.001). Conclusions: High physical activity and optimal eating habits especially adequate intake of important dietary components for bone health such as calcium, protein, vitamin D and phosphorus affect the mineralization of forearm bones.

Rev Med Suisse. 2024 Jan 17;20(856-7):36-41. doi: 10.53738/REVMED.2024.20.856-7.36.

Endocrinology: what's new in 2023

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This overview provides a selection of studies published in 2023 with an impact on clinical practice. In reproductive endocrinology, important studies have addressed fertility preservation in men with Klinefelter's syndrome, the cardiovascular safety of testosterone replacement therapy, and a novel therapy, fezolinetant, for vasomotor symptoms of menopause. The updated European recommendations concerning adrenal incidentalomas will considerably modify current clinical practice. Based on a solid epidemiological work, the prevalence of pituitary adenomas has been confirmed to affect about 1 per 1000 individuals. Finally, a large British study allows to refine the benefit-risk profile of the three options available for the treatment of hyperthyroidism.

J Cancer. 2024 Jan 1;15(4):1077-1092. doi: 10.7150/jca.91471. eCollection 2024.

The Effectiveness of Metabolic Bariatric Surgery in Preventing Gynecologic Cancer - from Pathophysiology to Clinical Outcomes

Nikolaos Machairiotis 1, Athanasios G Pantelis, Anastasios Potiris, Theodoros Karampitsakos, Petros Drakakis, et al. Obesity and cancer represent two pandemics of current civilization, the progression of which has followed parallel trajectories. To time, thirteen types of malignancies have been recognized as obesity-related cancers, including breast (in postmenopausal women), endometrial, and ovarian cancer. Pathophysiologic mechanisms that connect the two entities include insulin resistance, adipokine imbalance, increased peripheral aromatization and estrogen levels, tissue hypoxia, and disrupted immunity in the cellular milieu. Beyond the connection of obesity to carcinogenesis at a molecular and cellular level, clinicians should always be cognizant of the fact that obesity might have secondary impacts on the diagnosis and treatment of gynecologic cancer, including limited access to effective screening programs, resistance to chemotherapy and targeted therapies, persisting lymphedema, etc. Metabolic bariatric surgery represents an attractive intervention not only for decreasing the risk of carcinogenesis in high-risk women living with obesity but most importantly as a measure to improve disease-specific and overall survival in patients with diagnosed obesity-related gynecologic malignancies. The present narrative review summarizes current evidence on the underlying pathophysiologic mechanisms, the clinical data, and the potential applications of metabolic bariatric surgery in all types of gynecologic cancer, including breast, endometrial, ovarian, cervical, vulvar, and vaginal.

Osteoporos Int. 2024 Jan 17. doi: 10.1007/s00198-023-07012-1. Online ahead of print.

A meta-analysis of previous falls and subsequent fracture risk in cohort studies

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Introduction: Previous falls are a well-documented risk factor for subsequent fracture but have not yet been incorporated into the FRAX algorithm. The aim of this study was to evaluate, in an international meta-analysis, the association between previous falls and subsequent fracture risk and its relation to sex, age, duration of follow-up, and bone mineral density (BMD). **Methods:** The resource comprised 906,359 women and men (66.9% female) from 46 prospective cohorts. Previous falls were uniformly defined as any fall occurring during the previous year in 43 cohorts; the remaining three cohorts had a different question construct. The association between previous falls and fracture risk (any clinical fracture, osteoporotic fracture, major osteoporotic fracture, and hip fracture) was examined using an extension of the Poisson regression model in each cohort and each sex, followed by random-effects meta-analyses of the weighted beta coefficients. **Results:** Falls in the past year were reported in 21.4% of individuals. During a follow-up of 9,102,207 person-years, 87,352 fractures occurred of which 19,509 were hip fractures. A previous fall was associated with a significantly increased risk of any clinical fracture both in women (hazard ratio (HR) 1.42, 95% confidence interval (CI) 1.33-1.51) and men (HR 1.53, 95% CI 1.41-1.67). The HRs were of similar magnitude for osteoporotic, major osteoporotic fracture, and hip fracture. Sex significantly modified the association between previous fall and fracture risk, with predictive values being higher in men than in women (e.g., for major osteoporotic fracture, HR 1.53 (95% CI 1.27-1.84) in men vs. HR 1.32 (95% CI 1.20-1.45) in women, P for interaction = 0.013). The HRs associated with previous falls decreased with age in women and with duration of follow-up in men and women for most fracture outcomes. There was no evidence of an interaction between falls and BMD for fracture risk. Subsequent risk for a major osteoporotic fracture increased with each additional previous fall in women and men. **Conclusions:** A previous self-reported fall confers an increased risk of fracture that is largely independent of BMD. Previous falls should be considered as an additional risk factor in future iterations of FRAX to improve fracture risk prediction.