



Selección de Resúmenes de Menopausia

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The Gut Microbiome: a New Frontier in Musculoskeletal Research

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Purpose of the review: The human gut harbors a complex community of microbes that influence many processes regulating musculoskeletal development and homeostasis. This review gives an update on the current knowledge surrounding the impact of the gut microbiota on musculoskeletal health, with an emphasis on research conducted over the last three years. Recent findings: The gut microbiota and their metabolites are associated with sarcopenia, osteoporosis, osteoarthritis, and rheumatoid arthritis. The field is moving fast from describing simple correlations to pursue establishing causation through clinical trials. The gut microbiota and their microbial-synthesized metabolites hold promise for offering new potential alternatives for the prevention and treatment of musculoskeletal diseases given its malleability and response to environmental stimuli.

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Physical capability, physical activity, and their association with femoral bone mineral density in adults aged 40 years and older: The Tromsø study 2015-2016

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Introduction: Muscle influences bone formation and vice versa. Tests of physical capability and level of physical activity reflect various muscle qualities. We assessed the associations between total hip aBMD and physical activity as well as a range of standardized physical capability tests in an adult general population. Methods: A total of 3 533 women and men aged 40-84 years, participating in the population-based cross-sectional Tromsø study in Norway in 2015-2016, were included. Linear regression was used to assess associations between aBMD and physical activity and the physical capability tests grip strength, Timed Up and Go (TUG), Short Physical Performance Battery (SPPB), and standing balance. Non-linear associations were examined in cubic spline models. Standardized regression coefficients were calculated to compare effect sizes across physical capability measures. Results: In fully adjusted models, higher physical activity was positively associated with total hip aBMD in both sexes compared to a sedentary lifestyle. All tests of physical capability were associated with aBMD in women, SPPB showing the strongest association although effect sizes were too small to indicate clinically significant differences (1 point increase corresponded to an aBMD increase of 0.009 g/cm², CI = 0.005 to 0.012). In men, SPPB and its subtests were associated with aBMD with chair rises showing the strongest association (1 s increase in execution time corresponded to an aBMD decrease of 0.005 g/cm², CI = 0.008 to 0.002). Conclusion: Physical activity was associated with aBMD, and tests of physical capability can account for some of the aBMD variations in adults aged 40 years and older, especially in women.

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Prediagnostic use of estrogen-only therapy is associated with improved colorectal cancer survival in menopausal women: a Swedish population-based cohort study

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Background: Menopausal hormone therapy (MHT) reduces the risk of developing colorectal cancer (CRC), yet it is largely unclear whether it could also influence survival in women with CRC. Therefore, we aimed to investigate the influence of prediagnostic MHT use on CRC-specific and all-cause mortality in women with CRC. Methods: This nationwide nested cohort study, within a large population-based matched cohort, included all women diagnosed with incident CRC between January 2006 and December 2012 (N = 7814). A total of 1529 women had received at least one dispensed prescription of systemic MHT before CRC diagnosis, and 6285 CRC women with CRC did not receive MHT during the study period, as ascertained from the Swedish Prescribed Drug Registry. Multivariable Cox regression models provided adjusted hazard ratios (HRs) with 95% confidence intervals (CIs) for CRC-specific mortality and all-cause mortality. Results: Past use of prediagnostic estrogen-only therapy (E-MHT) was associated with lower CRC-

specific (HR = 0.67, 95%CI 0.44-0.99) and all-cause mortality (HR = 0.68, 95%CI 0.59-0.93). However, all-cause mortality (HR = 1.23, 95%CI 1.02-1.48) was elevated among current prediagnostic E-MHT users who were 70+ years at diagnosis. Current estrogen combined progestin therapy (EP-MHT) was associated with higher CRC-specific mortality (HR = 1.61, 95%CI 1.06-2.44) in older women, but no association was shown for all-cause mortality. Conclusions: Our findings suggest that E-MHT, but not EP-MHT use, might be associated with improved CRC survival, indicating a potential role of estrogens in sex hormone-related cancers. However, association of MHT use with grade of cancer remains unclear.

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Associations of Dairy Intake with Circulating Biomarkers of Inflammation, Insulin Response, and Dyslipidemia among Postmenopausal Women

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 Background: Cardiometabolic diseases are prevalent in aging Americans. Although some studies have implicated greater intake of dairy products, it is not clear how dairy intake is related to biomarkers of cardiometabolic health. Objective: Our aim was to test the hypothesis that associations of dairy foods with biomarkers of lipid metabolism, insulin-like growth factor signaling, and chronic inflammation may provide clues to understanding how dairy can influence cardiometabolic health. Design: This was a cross-sectional study in the Women's Health Initiative using baseline food frequency questionnaire data to calculate dairy intake. Participants/setting: Participants were 35,352 postmenopausal women aged 50 to 79 years at 40 clinical centers in the United States. Main outcome measures: Baseline (1993-1998) concentrations of 20 circulating biomarkers were measured. Statistical analyses: multivariable-adjusted linear regression was used to estimate percent difference in biomarker concentrations per serving of total dairy and individual foods (milk, cheese, yogurt, butter, and low-fat varieties). Results: Lower triglyceride concentrations were associated with greater intake of total dairy (-0.8% [95% CI -1.2% to -0.3%]), mainly driven by full-fat varieties. Individual dairy foods had specific associations with circulating lipid components. For example, greater total milk intake was associated with lower concentrations of total cholesterol (-0.4% [95% CI -0.7% to -0.2%]) and high-density lipoprotein cholesterol (-0.5% [95% CI -0.9% to -0.1%]), whereas greater butter intake was associated with higher total cholesterol (0.6% [95% CI 0.2% to 1.0%]) and high-density lipoprotein cholesterol (1.6% [95% CI 1.1% to 2.0%]) concentrations. In contrast, higher total yogurt intake was associated with lower total cholesterol (-1.1% [95% CI -2.0% to -0.2%]) and higher high-density lipoprotein cholesterol (1.8% [95% CI 0.5% to 3.1%]). Greater total dairy intake (regardless of fat content), total cheese, full-fat cheese, and yogurt were consistently associated with lower concentrations of glucose, insulin, and C-reactive protein. However, milk and butter were not associated with these biomarkers. Conclusions: Higher dairy intake, except butter, was associated with a favorable profile of lipids, insulin response, and inflammatory biomarkers, regardless of fat content. Yet, specific dairy foods might influence these markers uniquely. Findings do not support a putative role of dairy in cardiometabolic diseases observed in some previous studies.

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Menopausal hormone therapies and risk of colorectal cancer: a Swedish matched-cohort study

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 Background: Menopausal hormone therapy (MHT) has been associated with various malignancies. Aims: To investigate the association of various MHT regimens with the risk of colorectal cancer (CRC). Methods: All MHT ever-users (n = 290 186) were included through the Swedish Prescribed Drug Registry, with a 1:3 group-level matching to non-users. Ever-users were defined as women who received ≥ 1 dispensed prescription of systemic MHT during 2005-2012 in Sweden. All CRC cases after drug initiation were extracted from the Swedish Cancer Registry. The association was assessed by multivariable conditional logistic and Cox regression models, presented as odds ratios (ORs) or hazard ratios (HRs) with 95% confidence intervals (CIs) considering different regimens, duration and age at treatment initiation. Results: Compared with non-users, MHT users had an overall reduced odds for colon (OR = 0.67, 95% CI 0.63-0.72) and rectal adenocarcinoma (OR = 0.66, 95% CI 0.60-0.73), especially among women aged 40-60 years. Current users of oestrogen-only preparations (E-MHT) showed a reduced odds (colon OR = 0.73, 95% CI 0.65-0.82; rectal OR = 0.76, 95% CI 0.64-0.90) compared to non-users, particularly with oestradiol and oestriol. Past E-MHT use showed stronger odds reductions (colon OR = 0.49, 95% CI 0.43-0.56; rectal OR = 0.36, 95% CI 0.28-0.45).

Current use of oestrogen combined progestin therapy (EP-MHT) indicated a less prominent odds reduction (colon adenocarcinoma OR 0.62, 95% CI 0.54-0.72; rectal adenocarcinoma OR = 0.60, 95% CI 0.49-0.74) than past users. Tibolone showed an increased risk of left-sided colorectal adenocarcinoma. Oral and cutaneous MHT usage showed similar patterns. Conclusions: MHT use may decrease colorectal adenocarcinoma risk, for both E-MHT and EP-MHT, and especially in past users.

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Comparing the efficacies of bisphosphonates' therapies for osteoporosis persistence and compliance: A Systematic Review.

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Objectives: Osteoporosis is the most prevalent metabolic bone disorder worldwide. This review was undertaken to compare the efficacies of bisphosphonates therapies for patient persistence and compliance for the treatment of osteoporosis. **Methods:** A systematic review was performed in accordance with the available reporting items. MEDLINE and Cochrane library databases were applied for literature searched up to January 2020. All major studies such as prospective, retrospective and reviews articles that examined patient persistence or compliance to bisphosphonates for osteoporosis were included. **Results:** Literature search found 656 relevant published reports, out of which 87 were included. The 10,712,176 osteoporotic patients were studied for patient persistence and 5,875,718 patients were studied for patient compliances. Analysis of all studied bisphosphonates showed almost similar patterns for patient persistence rates as it was decreased over the time following initial prescription but persistence length was found to be significantly high for alendronate therapy as compared to the other studied bisphosphonates ($p < 0.001$), whereas the length of persistence of all other bisphosphonates (other than alendronate) were almost same ($p > 0.05$). Analysis of patient compliances with etidronate therapy showed the highest percent medication possession ratio (MRP) at 12 months, followed by the MRPs of ibandronate, alendronate, risedronate, and clodronate. **Conclusions:** This is the first systematic review that shows the comparison of the efficiencies of bisphosphonates for patient persistence and compliance for the treatment of osteoporosis. The data showed that the length of patient persistence was highest for alendronate therapy, whereas patient compliance was highest for etidronate therapy for the treatment of osteoporosis.