



Selección de Resúmenes de Menopausia

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Osteomicrobiology: A New Cross-Disciplinary Research Field.

Ohlsson C, Sjögren K.

The mutualistic interaction between the gut microbiota (GM) and its host profoundly shapes many aspects of our physiology. The composition and activity of the gut microbiota is modulated by environmental factors such as dietary habits and antibiotic treatments. In rodents, studies demonstrate that the GM is a crucial regulator of bone metabolism and that modulation of the GM composition by probiotic interventions can prevent castration-induced bone loss. Short-term colonization of germ-free mice with GM results in an activation of CD4+T cells, resulting in increased levels of pro-inflammatory cytokines in bone and thereby activation of osteoclastic bone resorption. Besides these immune-mediated effects on bone mass, the GM is involved in nutritional uptake and may, thereby, regulate overall body growth and bone sizes possibly mediated via altered IGF-I levels. We recently introduced a new term "osteomicrobiology" for the rapidly emerging research field of the role of the microbiota in bone health. This research field is aimed to bridge the gaps between bone physiology, gastroenterology, immunology, and microbiology. Future studies will determine if the GM is a novel therapeutic target for osteoporosis and if the GM composition might be used as a biomarker for fracture prediction.

J Am Heart Assoc. 2017 Oct 27;6(11). pii: e006887. doi: 10.1161/JAHA.117.006887.

Coronary Artery Calcification (CAC) and Post-Trial Cardiovascular Events and Mortality Within the Women's Health Initiative (WHI) Estrogen-Alone Trial.

Poornima IG, Mackey RH, Allison MA, Manson JE, , et al; WHI and WHI-CAC Study Investigators.

BACKGROUND: Among women aged 50 to 59 years at baseline in the Women's Health Initiative (WHI) Estrogen-Alone (E-Alone) trial, randomization to conjugated equine estrogen-alone versus placebo was associated with lower risk of myocardial infarction and mortality, and, in an ancillary study, the WHI-CACS (WHI Coronary Artery Calcification Study) with lower CAC, measured by cardiac computed tomography \approx 8.7 years after baseline randomization. We hypothesized that higher CAC would be related to post-trial coronary heart disease (CHD), cardiovascular disease (CVD), and total mortality, independent of baseline randomization or risk factors. **METHODS AND RESULTS:** WHI-CACS participants (n=1020) were followed \approx 8 years from computed tomography scan in 2005 (mean age=64.4) through 2013 for incident CHD (myocardial infarction and fatal CHD, n=17), CVD (n=69), and total mortality (n=55). Incident CHD and CVD analyses excluded women with CVD before scan (n=89). Women with CAC=0 (n=54%) had very low age-adjusted rates/1000 person-years of CHD (0.91), CVD (5.56), and mortality (3.45). In comparison, rates were \approx 2-fold higher for women with any CAC (>0). Associations were not modified by baseline randomization to conjugated equine estrogen-alone versus placebo. Adjusted for baseline randomization and risk factors, the hazard ratio (95% confidence interval) for CAC >100 (19%) was 4.06 (2.11, 7.80) for CVD and 2.70 (1.26, 5.79) for mortality. **CONCLUSIONS:** Among a subset of postmenopausal women aged 50 to 59 years at baseline in the WHI E-Alone Trial, CAC at mean age of 64 years was strongly related to incident CHD, CVD, and to total mortality over \approx 8 years, independent of baseline randomization to conjugated equine estrogen-alone versus placebo or CVD risk factors.

Eur Rev Med Pharmacol Sci. 2017 Oct;21(19):4386-4390.

Exploration on the relationship between the elderly osteoporosis and cardiovascular disease risk factors.

Lian XL, Zhang YP, Li X, Jing LD, Cairang ZM, Gou JQ.

OBJECTIVE: To explore and discuss the correlation between osteoporosis and the risk factors of cardiovascular diseases in the elderly. **PATIENTS AND METHODS:** A total of 1240 patients, who were hospitalized in our hospital from January 2012 to January 2017, with the age \geq 65 years old, were selected. All the patients were divided into

osteoporosis group and normal bone mass group according to their bone mineral density. The general conditions, biochemical indexes, combined cardiovascular diseases, and the related risk factors, were recorded and analyzed. **RESULTS:** The proportion of patients with coronary heart diseases, hyperlipidemia, diabetes mellitus, and smoking in osteoporosis group was significantly higher than that in normal bone mass group ($p < 0.05$). Results of binary logistic regression analysis showed that homocysteine (HCY), low density lipoprotein (LDL) and total cholesterol (TC) were the major risk factors of osteoporosis in the elderly patients. High-density lipoprotein (HDL) and body weight were protective factors for senile patients with osteoporosis. Female, hypertension, coronary heart diseases, hyperlipidemia, and diabetes mellitus were the main risk factors of complication in the elderly patients with osteoporosis. **CONCLUSIONS:** Senile osteoporosis is closely correlated with cardiovascular diseases and related risk factors, including hypertension, coronary heart disease as well as hyperlipidemia, and should be early prevented and treated.

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Milk and other dairy foods and risk of hip fracture in men and women.

Feskanich D, Meyer HE, Fung TT, Bischoff-Ferrari HA, Willett WC.

INTRODUCTION: The purpose of this study was to examine whether higher milk and dairy food consumption are associated with risk of hip fracture in older adults following a report of an increased risk for milk in Swedish women. **METHODS:** In two US cohorts, 80,600 postmenopausal women and 43,306 men over 50 years of age were followed for up to 32 years. Cox proportional hazards models were used to calculate the relative risks (RR) of hip fracture per daily serving of milk (240 mL) and other dairy foods that were assessed every 4 years, controlling for other dietary intakes, BMI, height, smoking, activity, medications, and disease diagnoses. **RESULTS:** Two thousand one hundred thirty-eight incident hip fractures were identified in women and 694 in men. Each serving of milk per day was associated with a significant 8% lower risk of hip fracture in men and women combined (RR = 0.92, 95% confidence interval (CI) 0.87 to 0.97). A suggestive inverse association was found for cheese in women only (RR = 0.91, CI 0.81 to 1.02). Yogurt consumption was low and not associated with risk. Total dairy food intake, of which milk contributed about half, was associated with a significant 6% lower risk of hip fracture per daily serving in men and women (RR = 0.94, CI 0.90 to 0.98). Calcium, vitamin D, and protein from non-dairy sources did not modify the association between milk and hip fracture, nor was it explained by contributions of these nutrients from milk. **CONCLUSIONS:** In this group of older US adults, higher milk consumption was associated with a lower risk of hip fracture.

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Coronary endothelial function is better in healthy premenopausal women than in healthy older postmenopausal women and men.

Mathews L, Iantorno M, Schär M, Bonanno G, Gerstenblith G, Weiss RG, Hays AG.

BACKGROUND: Premenopausal women have fewer cardiovascular disease (CVD) events than postmenopausal women and age-matched men, but the reasons are not fully understood. Coronary endothelial function (CEF), a barometer of coronary vascular health, promises important insights into age and sex differences in atherosclerotic CVD risk, but has not been well characterized in healthy individuals because of the invasive nature of conventional CEF measurements. Recently developed magnetic resonance imaging (MRI) methods were used to quantify CEF (coronary area and flow changes in response to isometric handgrip exercise (IHE), an endothelial-dependent stressor) to test the hypothesis that healthy women have better CEF compared to men particularly at a younger age. **METHODS:** The study participants were 50 healthy women and men with no history of coronary artery disease (CAD) or traditional CV risk factors and Agatston coronary calcium score (on prior CT) < 10 for those ≥ 50 years. Coronary cross-sectional area (CSA) measurements and flow-velocity encoded images (CBF) were obtained at baseline and during continuous IHE using 3T breath-hold cine MRI-IHE. CEF (%change in CSA and CBF with IHE) comparisons were made according to age and sex, and all women ≥ 50 years were post-menopausal. **RESULTS:** In the overall population, there were no differences in CEF between men and women. However, when stratified by age and sex the mean changes in CSA and CBF during IHE were higher in younger premenopausal women than older postmenopausal women (% CSA: $15.2 \pm 10.6\%$ vs. $7.0 \pm 6.8\%$, $p = 0.03$ and %CBF: $59.0 \pm 37.0\%$ vs. $30.5 \pm 24.5\%$ $p = 0.02$). CBF change was also nearly two-fold better in premenopausal women than age-matched men ($59.0 \pm 37.0\%$ vs. $33.6 \pm 12.3\%$, $p = 0.03$). **CONCLUSIONS:** Premenopausal women have nearly two-fold better mean CEF compared to postmenopausal women. CEF, measured by CBF change is also better in premenopausal women than age-matched men but there are no sex differences in CEF after menopause. Fundamental age and sex differences in CEF exist and may contribute to

differences in the development and clinical manifestations of atherosclerotic CVD, and guide future trials targeting sex-specific mechanisms of atherogenesis.

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Metabolic syndrome in menopause and associated factors: a meta-analysis.

Pu D, Tan R, Yu Q, Wu J.

OBJECTIVE: Metabolic syndrome (MetS) is a cluster of risk factors for cardiovascular disease and diabetes. Menopause is associated with an increased risk for MetS. The purpose of this meta-analysis is to better understand the relationship between MetS and menopause. **METHODS:** MEDLINE and EMBASE were searched for all the associated articles on (1) MetS components in postmenopausal women vs. premenopausal women, (2) comparison of MetS incidence between surgical menopause and natural menopause, (3) the effect of hormone therapy (HT) with 17 β -estradiol (E2) compared to conjugated equine estrogen (CEE) on MetS components among postmenopausal women. A meta-analysis was applied by Review Manager 5.3 software. **RESULTS:** All comparable indicators were significantly unfavorably changed in postmenopausal women compared to premenopausal women except for high density lipoprotein cholesterol. Women who underwent surgical menopause suffered a 1.51-fold higher risk for MetS compared to those with natural menopause. HT with E2 provided more benefits for levels of triglyceride and diastolic blood, while CEE showed a better effect on both high and low-density lipoprotein cholesterol levels. **CONCLUSIONS:** Menopause nearly adversely affects all components of MetS, and surgical menopause may lead to a higher incidence of MetS compared to natural menopause. HT with various preparations may have different effects on MetS components. These results may clarify the management of menopause-related MetS in clinical practice.

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No increased death toll for long-term menopausal hormone therapy.

Pines A.

It took many years since the initial publication of data from the Women's Health Initiative (WHI) study until further analyses and additional accumulated clinical information allowed realization of the full scope of its results. At first, the focus was on morbidity, mainly the slightly higher incidence of cardiovascular events and breast cancer cases among postmenopausal hormone users. Then, the age factor became evident, and the good safety profile of hormone therapy in healthy women initiating treatment near menopause and using it for up to 10 years eased the previous concerns. Now, 15 years after the first release of the WHI data, long-term follow-up of the WHI cohort enables consideration of mortality records as well. These data were recently summarized by the WHI investigators as follows: 'Among postmenopausal women, hormone therapy with CEE plus MPA for a median of 5.6 years or with CEE alone for a median of 7.2 years was not associated with risk of all-cause, cardiovascular, or cancer mortality during a cumulative follow-up of 18 years.' It seems that the bitter debate on the hazards of postmenopausal hormone therapy has come to an end, since the existing database permits clear and rationalized prescribing decisions.