Selección de Resúmenes de Menopausia

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Techniques for diagnosing osteoporosis: a systematic review of cost-effectiveness studies.

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Objectives: The study question was whether dual-energy X-ray absorptiometry (DXA) alone is more cost-effective for identifying postmenopausal women with osteoporosis than a two-step procedure with quantitative ultrasound sonography (QUS) plus DXA. To answer this question, a systematic review was performed. Methods: Electronic databases (PubMed, INAHTA, Health Evidence Network, NIHR, the Health Technology Assessment program, the NHS Economic Evaluation Database, Research Papers in Economics, Web of Science, Scopus, and EconLit) were searched for cost-effectiveness publications. Two independent reviewers selected eligible publications based on the inclusion/exclusion criteria. Quality assessment of economic evaluations was undertaken using the Drummond checklist. Results: Seven journal articles and four reports were reviewed. The cost per true positive case diagnosed by DXA was found to be higher than that for diagnosis by QUS+DXA in two articles. In one article it was found to be lower. In three studies, the results were not conclusive. These articles were characterized by the differences in the types of devices, parameters and thresholds on the QUS and DXA tests and the unit costs of the DXA and QUS tests as well as by variability in the sensitivity and specificity of the techniques and the prevalence of osteoporosis. Conclusions: The publications reviewed did not provide clear-cut evidence for drawing conclusions about which screening test may be more cost-effective for identifying postmenopausal women with osteoporosis.

Soda consumption and risk of hip fractures in postmenopausal women in the Nurses' Health Study.

Fung TT, Arasaratnam MH, Grodstein F, Katz JN, Rosner B, Willett WC, Feskanich D.

BACKGROUND: The frequency of soda consumption remains high in the United States. Soda consumption has been associated with poor bone health in children, but few studies have examined this relation in adults, and to our knowledge, no study has examined the relation of soda consumption with risk of hip fractures. OBJECTIVE: We examined the association of soda, including specific types of soda, and risk of hip fracture in postmenopausal women. DESIGN: An analysis was conducted in postmenopausal women from the Nurses' Health Study cohort (n = 73,572). Diet was assessed at baseline by using a semiquantitative food-frequency questionnaire and updated approximately every 4 y. In ≤30 y of follow-up, we identified 1873 incident hip fractures. We computed RRs for hip fractures by the amount of soda consumption by using Cox proportional hazards models with adjustment for potential confounders. RESULTS: In multivariable models, each additional serving of total soda per day was associated with a significant 14% increased risk of hip fracture (RR: 1.14; 95% CI: 1.06, 1.23). The attributable risk in our cohort for total soda consumption was 12.5%. Risk was significantly elevated in consumers of both regular soda (RR: 1.19; 95% CI: 1.02, 1.38) and diet soda (RR: 1.12; 95% CI: 1.03, 1.21) and also did not significantly differ between colas and noncolas or sodas with or without caffeine. The association between soda and hip fractures did not differ by body mass index or diagnosis of diabetes. CONCLUSION: Increased soda consumption of all types may be associated with increased risk of hip fracture in postmenopausal women; however, a clear mechanism was not apparent on the basis of these observational data.

The effect of soy dietary supplement and low dose of hormone therapy on main cardiovascular health biomarkers: a randomized controlled trial.

Carmignani LO, Pedro AO, Costa-Paiva LH, Pinto-Neto AM.

PURPOSE: To assess the effects of a soy dietary supplement on the main biomarkers of cardiovascular health in postmenopausal women compared with the effects of low-dose hormone therapy (HT) and placebo. METHODS: Double-blind, randomized and controlled intention-to-treat trial. Sixty healthy postmenopausal women, aged 40-60

years, 4.1 years mean time since menopause were recruited and randomly assigned to 3 groups: a soy dietary supplement group (isoflavone 90mg), a low-dose HT group (estradiol 1 mg plus noretisterone 0.5 mg) and a placebo group. Lipid profile, glucose level, body mass index, blood pressure and abdominal/hip ratio were evaluated in all the participants at baseline and after 16 weeks. Statistical analyses were performed using the $\chi 2$ test, Fisher's exact test, Kruskal-Wallis non-parametric test, analysis of variance (ANOVA), paired Student's t-test and Wilcoxon test. RESULTS: After a 16-week intervention period, total cholesterol decreased 11.3% and LDL-cholesterol decreased 18.6% in the HT group, but both did not change in the soy dietary supplement and placebo groups. Values for triglycerides, HDL-cholesterol, glucose level, body mass index, blood pressure and abdominal/hip ratio did not change over time in any of the three groups. CONCLUSION: The use of dietary soy supplement did not show any significant favorable effect on cardiovascular health biomarkers compared with HT.

Osteoporosis and periodontitis: Is there a possible link?

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BACKGROUND: Periodontitis and osteoporosis are two diseases found worldwide having the main characteristic of increasing intensity with age. Periodontitis is associated with resorption of the alveolar bone. Osteoporosis is characterized by bone loss leading to structural bone transformation. The association between periodontitis and osteoporosis is continually being examined. The aim of this study is to examine the condition of periodontal tissues in patients suffering from osteoporosis and establish a possible link. MATERIALS AND METHODS: Cross-sectional study with 200 samples having test (n = 100) and control group (n = 100) were checked for periodontal condition. A total of 100 patients diagnosed as having osteoporosis based on bone mineral density at distal end of radius were regarded as test group and 100 subjects included in control group were healthy. Periodontal parameters measured were plaque index (PI), gingival index (GI), probing depth (PD), and clinical attachment loss (CAL). Statistical test performed were Student's paired t-test and unpaired t-test and Pearson's correlation coefficient. RESULTS: Probing depth and CAL were significantly negatively co-related with T-score in test group when compared with control group. This meant an inverse relationship in between the T-score and the clinical parameters, PD and CAL. Furthermore, some difference was noted in test group in PI, GI and PD, CAL and T-score when compared with the controls. CONCLUSION: Thus, we conclude that there is a definite relationship between osteoporosis and periodontitis based on PD and CAL.

Association of CYP19 polymorphisms with breast cancer risk: A case-control study.

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BACKGROUND: The CYP19 gene is located on chromosome 15 and it plays an important role in aromatization, which results in production of estrogen from androgens. The mutation in this gene can result in either increased or decreased aromatase activity. MATERIALS AND METHODS: A case-control study was designed to compare 250 breast cancer cases with 250 age-matched healthy controls. The frequency distribution of CYP19 polymorphism was assessed by polymerase chain reaction confronting two pair primers (PCR-CTPP). RESULTS: CYP19 polymorphism at codon 39 Trp/Arg (W39R) results in three genotypes TT, TC, and CC, but in the present study CC genotype was not found in breast cancer cases as well as in controls. The TT genotype was significantly elevated in disease (90.8%) as compared to controls (68.5%). The frequency of TC was found to be increased in premenopausal women with breast cancer (12.2%) and the frequency of TT genotype was increased in patients who were postmenopausal (94.1%). The increased frequency of heterozygotes was found in cases with familial incidences of cancer (10.8%), estrogen and progesterone receptor positive status, node positive status (9.8%), and occupied in agriculture (14.8%). Higher frequencies of both TT and TC genotype were increased in patients with high body mass index (BMI). The frequency of TT genotype was found to be increased in advanced stage of the disease. CONCLUSION: Hence, we conclude that W39 with increased aromatase activity confers greater risk to develop breast cancer especially in postmenopausal women and might also contribute to advanced stage.

Birth weight and subsequent risk of cancer.

Spracklen CN, Wallace RB, Sealy-Jefferson S, Robinson JG, Freudenheim JL, Wellons MF, et al.

Background: We aimed to determine the association between self-reported birth weight and incident cancer in the Women's Health Initiative Observational Study cohort, a large multiethnic cohort of postmenopausal women. Methods: 65,850 women reported their birth weight by category (<6lbs, 6-7lbs 15oz, 8-9lbs 15oz, and ≥10lbs). All self-reported, incident cancers were adjudicated by study staff. We used Cox proportional hazards regression to estimate crude and adjusted hazard ratios (aHR) for associations between birth weight and: (1) all cancer sites combined, (2) gynecologic cancers, and (3) several site-specific cancer sites. Results: After adjustments, birth weight was positively associated with the risk of lung cancer (p=0.01), and colon cancer (p=0.04). An inverse trend was observed between birth weight and risk for leukemia (p=0.04). A significant trend was not observed with breast cancer risk (p=0.67); however, women born weighing ≥10lbs were less likely to develop breast cancer compared to women born between 6lbs-7lbs 15oz (aHR 0.77, 95% CI 0.63, 0.94). Conclusion: Birth weight category appears to be significantly associated with the risk of any postmenopausal incident cancer, though the direction of the association varies by cancer type.

Cost-effectiveness of vitamin D and calcium supplementation in the treatment of elderly women and men with osteoporosis.

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BACKGROUND: The supplementation with vitamin D and calcium has been recommended for elderly, specifically those with increased risk of fractures older than 65 years. This study aims to assess the cost-effectiveness of vitamin D and calcium supplementation in elderly women and men with osteoporosis and therefore to assess if this recommendation is justified in terms of cost-effectiveness. METHODS: A validated model for economic evaluations in osteoporosis was used to estimate the cost per quality-adjusted life-year (QALY) gained of vitamin D/calcium supplementation compared with no treatment. The model was populated with cost and epidemiological data from a Belgian health-care perspective. Analyses were conducted in women and men with a diagnosis of osteoporosis (i.e. bone mineral density T-score ≤-2.5). A literature search was conducted to describe the efficacy of vitamin D and calcium in terms of fracture risk reduction. RESULTS: The cost per QALY gained of vitamin D/calcium supplementation was estimated at €40 578 and €23 477 in women and men aged 60 years, respectively. These values decreased to €7912 and €10 250 at the age of 70 years and vitamin D and calcium supplementation was cost-saving at the age of 80 years, meaning that treatment cost was less than the costs of treating osteoporotic fractures of the no-treatment group. CONCLUSION: This study suggests that vitamin D and calcium supplementation is cost-effective for women and men with osteoporosis aged over 60 years. From an economic perspective, vitamin D and calcium should therefore be administrated in these populations including those also taking other osteoporotic treatments.

Association between serum 25-hydroxyvitamin D and ovarian reserve in premenopausal women.

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OBJECTIVE: Vitamin D has been linked to antimüllerian hormone levels, suggesting a possible association with greater ovarian reserve, but large population-based studies are lacking. Our objective was to explore the association between vitamin D and follicle-stimulating hormone (FSH) in premenopausal women. METHODS: The Uterine Fibroid Study (1996-1999) enrolled randomly selected 30- to 49-year-old members of a Washington, DC, health plan (N = 1,430). Women provided blood and urine samples in addition to questionnaire data. The vitamin D metabolite 25-hydroxyvitamin D (25(OH)D) was measured in stored plasma samples. Urinary FSH (mIU/mg creatinine) was measured by immunofluorometric assay. To obtain baseline measures, we limited this investigation to urine samples collected in the first 5 days of the menstrual cycle or 5 days before menses onset. In addition, postmenopausal women and women using oral contraceptives were excluded, leaving 527 women for analysis. FSH was creatinine-adjusted, normalized by log transformation, and modeled with multivariable linear regression. RESULTS: The median 25(OH)D level was 12 ng/mL, with approximately 75% of participants below the recommended level of 20 ng/mL. FSH and 25(OH)D were inversely related. For every 10-ng/mL increase in 25(OH)D, urinary FSH decreased by 14% (95% CI, -23 to -5; P = 0.003). CONCLUSIONS: Vitamin D is inversely related to FSH. This is consistent with literature relating low vitamin D levels to lower antimüllerian hormone levels. Prospective studies should investigate whether low vitamin D levels contribute to decreased ovarian reserve.

Off-label use of hormones as an antiaging strategy: a review.

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Given demographic evolution of the population in modern societies, one of the most important health care needs is successful aging with less frailty and dependency. During the last 20 years, a multitude of anti-aging practices have appeared worldwide, aiming at retarding or even stopping and reversing the effects of aging on the human body. One of the cornerstones of anti-aging is hormone replacement. At present, women live one third of their lives in a state of sex-hormone deficiency. Men are also subject to age-related testosterone decline, but andropause remains frequently under-diagnosed and under-treated. Due to the decline of hormone production from gonads in both sexes, the importance of dehydroepiandrosterone (DHEA) in steroid hormone production increases with age. However, DHEA levels also decrease with age. Also, growth hormone age-associated decrease may be so important that insulin growth factor-1 levels found in elderly individuals are sometimes as low as those encountered in adult patients with established deficiency. Skin aging as well as decreases in lean body mass, bone mineral density, sexual desire and erectile function, intellectual activity and mood have all been related to this decrease of hormone production with age. Great disparities exist between recommendations from scientific societies and actual use of hormone supplements in aging and elderly patients. In this article, we review actual data on the effects of age related hormone decline on the aging process and age-related diseases such as sarcopenia and falls, osteoporosis, cognitive decline, mood disorders, cardiovascular health and sexual activity. We also provide information on the efficiency and safety of hormone replacement protocols in aging patients. Finally, we argue on future perspectives of such protocols as part of everyday practice.

Osteoporosis in patients taking selective serotonin reuptake inhibitors: a focus on fracture outcome.

Bruyère O1, Reginster JY.

Depression is one of the most important mental health problems and a leading cause of disability. Selective serotonin reuptake inhibitors (SSRIs) are considered as first-line therapy for the treatment of depressive symptoms among older adults because of their presumed favorable adverse effect profile. However, they could have deleterious effects on the bone. Evidence from longitudinal, cross-sectional, and prospective cohort studies suggests that the use of antidepressants at therapeutic doses is associated with decreased bone mineral density and increased fracture risk. The association between SSRIs use and fracture risk could potentially differ depending on dose, exposure duration, time of exposure, age, or sex. However, the risk of fracture declined rapidly after discontinuation of use of SSRIs. The evidence now seems sufficient to consider adding SSRIs to the list of medications that contribute to osteoporosis. In practice, assessment of risk factor for osteoporosis or fractures could be made taking into account age, gender, duration, and severity of depression, length of SSRI treatments, and other concurrent risk factors.

Age at Menarche and Natural Menopause and Number of Reproductive Years in Association with Mortality: Results from a Median Follow-Up of 11.2 Years among 31,955 Naturally Menopausal Chinese Women.

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BACKGROUND: Studies conducted in Western countries suggest that early age at menarche and early age at menopause are both associated with increased total mortality, but limited data are available for Asian populations. We examined associations of age at menarche and natural menopause and duration of the reproductive span with mortality in a population-based cohort study of Chinese women. METHODS: We evaluated the effects of age at menarche, age at natural menopause, and number of reproductive years on total and cause-specific mortality among 31,955 naturally menopausal Chinese women who participated in the Shanghai Women's Health Study, a population-based, prospective cohort study. RESULTS: A total of 3,158 deaths occurred during a median follow-up of 11.2 years. Results from Cox proportional hazards models showed that younger age at menopause (<46.64 years) was associated with higher risk of total mortality (Ptrend =0.02). Younger age at menarche (<14 years) was associated with higher risk of mortality from stroke (Ptrend =0.03) and diabetes (Ptrend=0.02) but lower risk of mortality from respiratory system cancer (Ptrend =0.01). Women with a shorter reproductive span had lower risk of mortality from gynecological cancers (Ptrend=0.03). CONCLUSIONS: Our study found that menstrual characteristics are important predictors of mortality,

suggesting an important role of sex hormones in biological aging.