



## Selección de Resúmenes de Menopausia

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### **Effect of isolated vitamin D supplementation on bone turnover markers in younger postmenopausal women: a randomized, double-blind, placebo-controlled trial.**

Nahas-Neto J, Cangussu LM, Orsatti CL, Bueloni-Dias FN, Poloni PF, Schmitt EB, Nahas EAP.

Vitamin D (VD) plays an important role in bone mineralization. The present study investigates the effect of VD supplementation alone on bone turnover markers in younger postmenopausal women. It has been shown that VD supplementation in postmenopausal women with hypovitaminosis D is associated with a reduction in bone turnover markers. **PURPOSE:** The purpose of this study is to evaluate the effect of VD supplementation alone on bone turnover markers in younger postmenopausal women. **METHODS:** In this double-blind, placebo-controlled trial, 160 women were randomized into the VD group (supplementation with 1000 IU of vitamin D3/day, orally; n = 80) or placebo group (n = 80). Women aged 50-65 years with amenorrhea  $\geq$  12 months and normal bone mineral density were included. The intervention lasted 9 months, and the participants were assessed at the beginning and end of treatment. Serum levels of total calcium, parathormone (PTH), alkaline phosphatase (AP), and 24-h urine calcium were determined. Serum C-terminal telopeptide of type I collagen (s-CTX) and procollagen type 1 N-terminal propeptide (P1NP) were measured by immunoassay as markers of bone resorption and formation, respectively. Plasma 25-hydroxyvitamin-D [25(OH)D] concentrations were measured by HPLC. Intention-to-treat analysis was performed using ANOVA, Student's t test, Tukey's test, and gamma distribution. **RESULTS:** Over the period of 9 months, 25(OH)D concentrations increased from  $15.0 \pm 7.5$  to  $27.5 \pm 10.4$  ng/mL (+45.4%) in the VD group and decreased from  $16.9 \pm 6.7$  to  $13.8 \pm 6.0$  ng/mL (-18.5%) in the placebo group ( $p < 0.001$ ). There was a decrease (-21.3%) of PTH levels in the VD group with a significant difference between groups at the end of the study ( $p < 0.001$ ). No significant differences were observed in the other laboratory parameters (total calcium, AP, and calciuria) in either group ( $p > 0.05$ ). A comparison of bone turnover markers showed a significant reduction in of s-CTX (-24.2%,  $p < .0001$ ) and P1NP (-13.4%,  $p = 0.003$ ) levels in the VD group. No significant variations in bone turnover markers were observed in the placebo group (s-CTX, -6.9%,  $p = 0.092$  and P1NP, -0.6%,  $p = 0.918$ ). **CONCLUSION:** In younger postmenopausal women with VD deficiency, isolated supplementation with 1000 IU of vitamin D3 for 9 months is associated with a reduction in bone turnover markers. However, any between-group differences was not observed in bone turnover markers.

**Climacteric. 2018 Feb 15;1-4. doi: 10.1080/13697137.2017.1406914. [Epub ahead of print]**

### **Should women be screened for osteoporosis at midlife?**

de Villiers TJ.

Osteoporosis and associated fractures are common in women after midlife and will increase as the population ages. Osteoporosis-related fractures cause a significant increase in morbidity and mortality. Osteoporosis decreases the quality of life and productivity of many older women, with an increasing burden on health-care resources. Future risk of fracture can be managed by evidence-based interventions. It is thus appropriate to estimate the future risk of fracture in all women at the age of 50 years or at menopause, whichever occurs first. This can be achieved in a non-invasive fashion by targeted clinical history-taking. The future risk of fracture can be quantified using computerized models that integrate all risk factors, with or without dual-energy X-ray absorptiometry (DXA). Individuals found to be at increased risk of fracture need also to be assessed by DXA and, in the absence of lateral vertebral assessment, also by conventional X-ray imaging. All women should be screened by DXA at the age of 65 years, if not done before that time. At the age of 50, all women should be informed about a bone-friendly lifestyle.

**Nat Sci Sleep. 2018 Feb 9;10:73-95. doi: 10.2147/NSS.S125807. eCollection 2018.**

### **Sleep problems during the menopausal transition: prevalence, impact, and management challenges.**

Baker FC, de Zambotti M, Colrain IM, Bei B.

A substantial number of women experience sleep difficulties in the approach to menopause and beyond, with 26% experiencing severe symptoms that impact daytime functioning, qualifying them for a diagnosis of insomnia. Here, we review both self-report and polysomnographic evidence for sleep difficulties in the context of the menopausal transition, considering severity of sleep complaints and links between hot flashes (HFs) and depression with poor sleep. Longitudinal population-based studies show that sleep difficulties are uniquely linked with menopausal stage and changes in follicle-stimulating hormone and estradiol, over and above the effects of age. A major contributor to sleep complaints in the context of the menopausal transition is HFs, and many, although not all, HFs are linked with polysomnographic-defined awakenings, with HF-associated wake time contributing significantly to overall wakefulness after sleep onset. Some sleep complaints may be comorbid with depressive disorders or attributed to sleep-related breathing or movement disorders, which increase in prevalence especially after menopause, and for some women, menopause, age, and environmental/behavioral factors may interact to disrupt sleep. Considering the unique and multifactorial basis for sleep difficulties in women transitioning menopause, we describe clinical assessment approaches and management options, including combination treatments, ranging from cognitive behavioral therapy for insomnia to hormonal and nonhormonal pharmacological options. Emerging studies suggest that the impact of severe insomnia symptoms could extend beyond immediate health care usage and quality of life issues to long-term mental and physical health, if left untreated in midlife women. Appropriate treatment, therefore, has immediate benefit as well as advantages for maintaining optimal health in the postmenopausal years.

**Eur J Endocrinol. 2018 Feb 12. pii: EJE-18-0113. doi: 10.1530/EJE-18-0113. [Epub ahead of print]**

### **Calcium supplementation in osteoporosis: useful or harmful.**

Chiodini I, Bolland MJ.

Osteoporosis and fragility fractures are important social and economic problems worldwide and are due to both the loss of bone mineral density and sarcopenia. Indeed, fragility fractures are associated with increased disability, morbidity and mortality. It is known that a normal calcium balance together with a normal vitamin D status is important for maintaining well-balanced bone metabolism and for many years calcium and vitamin D has been considered crucial in the prevention and treatment of osteoporosis. However, recently the usefulness of calcium supplementation (alone or with concomitant vitamin D) has been questioned, since some studies reported only weak efficacy of these supplementations in reducing fragility fracture risk. On the other hand, besides the gastrointestinal side effects of calcium supplements and the risk of kidney stones related to use of co-administered calcium and vitamin D supplements, other recent data suggested potential adverse cardiovascular effects from calcium supplementation. This debate article is focused on the evidence regarding both the possible usefulness for bone health and the potential harmful effects of calcium and/or calcium with vitamin D supplementation.

**BMJ Open. 2018 Feb 13;8(2):e019027. doi: 10.1136/bmjopen-2017-019027.**

### **Does industry-sponsored education foster overdiagnosis and overtreatment of depression, osteoporosis and over-active bladder syndrome? An Australian cohort study.**

Mintzes B, Swandari S, Fabbri A, Grundy Q, Moynihan R, Bero L.

**OBJECTIVES:** To investigate patterns of industry-sponsored educational events that focus on specific health conditions for which there are concerns about overdiagnosis and overtreatment. **DESIGN AND SETTING:** This retrospective cohort study examines publicly reported industry-sponsored events in Australia from October 2011 to September 2015 for three conditions potentially subject to overdiagnosis and overtreatment: depression, osteoporosis and overactive bladder. We used a database of transparency reports to identify events with a focus on depression, osteoporosis and overactive bladder and compared these with other sponsored events. We hypothesised that companies marketing treatments for each condition would sponsor related events and that target audiences would mainly work in primary care, reflecting a broad patient population. **MAIN OUTCOME MEASURES:** Event and attendee characteristics, sponsoring companies, related marketed treatments, cost-effectiveness ratings and dispensing rates. **RESULTS:** Over the study period, we identified 1567 events focusing on depression, 1375 on osteoporosis and 190 on overactive bladder (total n=3132, with 96 660 attendees). These events were attended by primary care doctors more often than sponsored events without a focus on these three conditions: relative risk (RR)=3.06 (95% CI 2.81 to 3.32) for depression, RR=1.48 (95% CI 1.41 to 1.55) for osteoporosis and RR=2.59 (95% CI 2.09 to 3.21) for overactive bladder. Servier, which markets agomelatine and AstraZeneca (quetiapine) sponsored 51.2% and 23.0% of depression events, respectively. Amgen and GlaxoSmithKline, which co-market

denosumab, sponsored 49.5% of osteoporosis events and Astellas and Commonwealth Serum Laboratories (CSL) (mirabegron and solifenacin) sponsored 80.5% of overactive bladder events. CONCLUSIONS: This 4-year overview of industry-sponsored events on three overdiagnosed and overtreated conditions found that primary care clinicians were often targeted, dinner was often provided and that a few companies sponsored most events. In most cases, sponsors' products are not cost-effective choices for the specified condition. This pattern highlights the need for professional education to be free of commercial sponsorship.

**J Cosmet Dermatol. 2018 Feb 13. doi: 10.1111/jocd.12508. [Epub ahead of print]**

### **A review of the role of estrogen in dermal aging and facial attractiveness in women.**

Lephart ED.

Estrogens are known to have protective and favorable influences on skin health; conversely, androgens oppose the actions of estrogens. Estrogen's chemical messages are transmitted via the classical nuclear hormone estrogen receptors (ER) alpha and beta and the rapid-acting G-coupled membrane estrogen receptor. Androgens [both testosterone and 5 $\alpha$ -dihydrotestosterone (5 $\alpha$ -DHT)] bind the same androgen receptor. Estrogen levels peak in the mid- to late 20s in women and then decline by 50% by 50 years of age and dramatically decrease further after menopause. The loss of estrogens with aging contributes to diminished dermal health, whereas estrogen hormone therapy [eg, oral conjugated equine estrogens (CEE)] restores skin health. Several reports suggest positive correlations between the levels of circulating estrogens and: (1) perceived age, (2) attractiveness, (3) enhanced skin health, and (4) facial coloration in women. Based upon a psychological dermato-endocrine perspective, the positive correspondence of high estrogens levels with perceived age and facial attractiveness in women especially with aging demonstrates the importance of hormonal influences on observed dermal health and youthful appearance.

**Orthop Surg. 2018 Feb 12. doi: 10.1111/os.12360. [Epub ahead of print]**

### **Low Grip Strength is a Strong Risk Factor of Osteoporosis in Postmenopausal Women.**

Li YZ, Zhuang HF, Cai SQ, Lin CK, Wang PW, Yan LS, Lin JK, Yu HM.

**OBJECTIVE:** To investigate the effect of grip strength on bone mineral density (BMD) in postmenopausal women. Low BMD is related to risk of fracture and falling is the strongest factor for fragility fractures. Handgrip strength is a reliable indicator of muscle strength and muscle strength is associated with falling. **METHODS:** For the present study 120 women were divided into two groups: those  $\leq 65$  years and those  $> 65$  years. Serum 25 hydroxyvitamin D (25OHD), BMD, and handgrip strength were measured to observe the effect of age on 25OHD, grip strength, and BMD, as well as the effect of 25OHD on grip strength and BMD. The correlation between grip strength and BMD was investigated.

**RESULTS:** In the 120 patients, 25OHD was  $24.31 \pm 8.29$  ng/mL. There were 37 cases with 25OHD  $< 20$  ng/mL and 83 cases with 25 OHD  $\geq 20$  ng/mL. The patients with 25OHD  $< 20$  ng/mL had significantly lower femoral neck BMD, most of them with a T score  $\leq -2.5$  ( $P < 0.05$ ). BMD measurement showed 66 patients with femoral neck T  $\leq -2.5$ , 30 cases with total hip T  $\leq -2.5$  and 90 cases with lumbar BMD T  $\leq -2.5$ . The maximum grip strength in the group is  $22.28 \pm 6.17$  kg. There were 38 cases with the maximum grip strength  $< 20$  kg and 82 cases with the maximum grip strength  $\geq 20$  kg. Patients  $> 65$  years had lower 25OHD, lower maximum grip strength, and lower BMD. The osteoporosis risk in postmenopausal women with a maximum grip strength  $< 20$  kg and who were  $> 65$  years was significantly elevated.

**CONCLUSION:** Handgrip strength and 25OHD decrease with aging in postmenopausal women. The patients with lower 25OHD level had significantly lower BMD of femoral neck. The patients with lower handgrip strength had significantly lower BMD of lumbar spine, femoral neck, and total hip. Grip strength measurement is the simplest muscle strength measurement method. Our study confirmed that low grip strength was correlated with low BMD and was a strong risk factor for osteoporosis in postmenopausal women.