



## Selección de Resúmenes de Menopausia

Semana del 27 de enero al 2 de febrero 2021

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**Eur J Clin Nutr. 2021 Jan 29;doi: 10.1038/s41430-021-00856-y. Online ahead of print.**

### **El consumo de té antes de la menopausia se asocia a una mayor densidad mineral ósea en las mujeres posmenopáusicas**

### **Drinking tea before menopause is associated with higher bone mineral density in postmenopausal women**

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**Background:** Though tea drinking years and menopause stages have been indicated to be related with bone mineral density (BMD), most human studies have not considered the impact of tea drinking beginning time. Whether drinking tea before or after menopause plays a role in BMD is still unclear. This study aims to analyze whether drinking tea before or after menopause influences BMD in Chinese postmenopausal women. **Methods:** A total of 1377 postmenopausal women under 80 years were enrolled from the baseline survey of the Lanxi Cohort Study. Participants were initially categorized into non-tea drinking, tea drinking beginning after menopause and tea drinking beginning before menopause groups. Tea drinking groups were subdivided according to tea drinking frequency, concentration and type. Multiple linear regression models were applied to evaluate associations between tea drinking before or after menopause and BMD and the impacts of tea drinking frequency, concentration and type on their associations in analyses including all participants. Interactions of tea drinking frequency, concentration and type with drinking tea before or after menopause were further analyzed. **Results:** After adjusting for confounding factors, women who began drinking tea before menopause had significantly higher total and regional BMD than non-tea drinking participants and participants who began drinking tea after menopause. Differences in spine BMD were more significant among those who drank tea  $\geq$ four times per week. In addition, significant associations between tea drinking and BMD were found among participants who began drinking tea before menopause in both models, irrespective of the concentration and type of tea. No significant associations were found in subgroups of participants who began drinking tea after menopause in either model. **Conclusions:** The results indicate that drinking tea before menopause is related to higher BMD in Chinese postmenopausal women. The relationship is independent of tea drinking concentration and type.

**Biol Sex Differ. 2021 Jan 29;12(1):16.doi: 10.1186/s13293-021-00363-6.**

### **Relación de menopausia con efectos de COVID-19: un análisis de emparejamiento por puntuación de propensión**

### **Association of menopausal status with COVID-19 outcomes: a propensity score matching analysis**

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**Background:** Despite the growing number of studies on the coronavirus disease-19 (COVID-19), little is known about the association of menopausal status with COVID-19 outcomes. **Materials and methods:** In this retrospective study, we included 336 COVID-19 inpatients between February 15, 2020 and April 30, 2020 at the Taikang Tongji Hospital (Wuhan), China. Electronic medical records including patient demographics, laboratory results, and chest computed tomography (CT) images were reviewed. **Results:** In total, 300 patients with complete clinical outcomes were included for analysis. The mean age was 65.3 years, and most patients were women (n = 167, 55.7%). Over 50% of patients presented with comorbidities, with hypertension (63.5%) being the most common comorbidity. After propensity score matching, results showed that men had significantly higher odds than premenopausal women for developing severe disease type (23.7% vs. 0%, OR 17.12, 95% CI 1.00-293.60; p = 0.003) and bilateral lung infiltration (86.1% vs. 64.7%, OR 3.39, 95% CI 1.08-10.64; p = 0.04), but not for mortality (2.0% vs. 0%, OR 0.88, 95% CI 0.04-19.12, p = 1.00). However, non-significant difference was observed among men and postmenopausal women in the percentage of severe disease type (32.7% vs. 41.7%, OR 0.68, 95% CI 0.37-1.24, p = 0.21), bilateral lung infiltration (86.1% vs. 91.7%, OR 0.56, 95% CI 0.22-1.47, p = 0.24), and mortality (2.0% vs. 6.0%, OR 0.32, 95% CI 0.06-1.69, p = 0.25). **Conclusions:** Men had higher disease severity than premenopausal women, while the differences disappeared between

postmenopausal women and men. These findings support aggressive treatment for the poor prognosis of postmenopausal women in clinical practice.

**J Med Life. Oct-Dec 2020;13(4):449-453.doi: 10.25122/jml-2019-0131.**

## **Glucocorticoides y puntuación ósea trabecular**

### **Glucocorticoids and Trabecular Bone Score**

Florica Sandru<sup>1, 2</sup>, Mara Carsote<sup>2, 3</sup>, Mihai Cristian Dumitrascu<sup>2, 4</sup>, Simona Elena Albu<sup>2, 4</sup>, Ana Valea<sup>5</sup>. TBS (Trabecular Bone Score) is the latest tool for clinicians to evaluate bone micro-architecture based on a pixel greyscale, which is provided by lumbar dual-energy X-ray absorptiometry (DXA). Its use enhances fracture prediction in addition to DXA-BMD (Bone Mineral Density). This is independent of fracture risk assessment (FRAX) and DXA results. We present a narrative review regarding the connection between TBS and Glucocorticoids (GC), either as a drug used for different conditions or as a tumor-produced endogenous excess. TBS is a better discriminator for GC-induced vertebral fractures compared to DXA-BMD. This aspect is similarly available for patients with osteoporosis diagnosed by DXA. TBS is inversely correlated with the cumulative dose of GC (systemic or inhaled), with disease duration, and positively correlated with respiratory function in patients with asthma. Low TBS values are found in females with a T-score at the hip within the osteoporosis range, with diabetes mellitus, or who use GC. Lumbar TBS is a screening tool in menopausal women with type 2 diabetes mellitus. TBS is an independent parameter that provides information regarding skeleton deterioration in diabetic patients receiving GC therapy in a manner complementary to DXA-BMD. TBS might become an essential step regarding the adrenalectomy decision in patients with adrenal incidentaloma in whom autonomous cortisol secretion might damage bone micro-architecture. TBS currently represents a standard tool of fracture risk evaluation in patients receiving GC therapy or with endogenous Cushing's syndrome, a tool easy to be applied by different practitioners since GCs are largely used.

**Semin Reprod Med. 2021 Jan 28.doi: 10.1055/s-0040-1722318. Online ahead of print.**

## **Menopausia prematura y temprana y su relación con las enfermedades cardiovasculares**

### **Premature and Early Menopause in Relation to Cardiovascular Disease**

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Postmenopausal women have an increased risk for cardiovascular diseases. It has been postulated that the loss of ovarian function and subsequent deficiency of endogenous estrogens after menopause contributes to this elevated risk of cardiovascular disease in postmenopausal women. Compared with woman entering menopause at the mean age of 51 years, in women with early menopause or premature ovarian insufficiency the risk for cardiovascular disease is even greater. These women lack the cardioprotective effect of endogenous estrogens for many more years than do women entering natural menopause. The majority of data assessing the risk of cardiovascular disease in relation to age at menopause and specifically premature menopause are derived from large epidemiological cohort studies. In addition, observations in women undergoing bilateral oophorectomy at an early age provide convincing evidence regarding association between early menopause or POI and the development of cardiovascular events and mortality. Moreover, genetic variants associated with earlier age at menopause have also been found to increase the risk of cardiovascular events in women. It has been substantiated that hormone replacement therapy (HRT) decreases the risk for ischemic heart disease and eliminates the increased cardiovascular disease mortality. It is therefore crucial to start HRT as soon as possible, particularly in women with premature ovarian insufficiency.

**Mol Cell Endocrinol. 2021 Jan 25;111180.doi: 10.1016/j.mce.2021.111180. Online ahead of print.**

## **Terapia de reemplazo hormonal después de un cáncer de mama: ¿Sí, no, o tal vez?**

### **Hormone Replacement Therapy After Breast Cancer: Yes, No or Maybe?**

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Over nine million breast cancer survivors worldwide suffer compromised quality of life attributable to estrogen depletion related symptoms of menopause and side effects of cancer therapy. Hormone Replacement Therapy (HRT) is very effective in managing these symptoms in general population and in breast cancer survivors. However, the concern of

breast cancer recurrence as a result of HRT use keeps many oncologists from using this approach in symptom management. Evidence from randomized trials, observational studies and met-analyses on the impact of HRT use on breast cancer recurrence and survival remains controversial. Climacteric symptoms in breast cancer survivors should be delineated for type and severity for methodical management. Lifestyle modifications are effective for mild symptoms, while non-hormonal pharmaceutical approaches can be used as second-line therapy for control of hot flashes, vulvo-vaginal atrophy, arthralgia, mood swings, sleep disturbance, and depression. Evidence does not conclusively render HRT, as a contraindicated approach for these patients; informed consent and shared-decision-making is a reasonable approach for HRT use in symptomatic breast cancer survivors.

**Biochem Biophys Res Commun. 2021 Jan 21;542:48-53.doi: 10.1016/j.bbrc.2021.01.026. Online ahead of print.**

## **El tratamiento con un análogo activo de vitamina D bloquea la pérdida ósea inducida por disfunción hipotalámica en ratones**

### **Treatment with an active vitamin D analogue blocks hypothalamic dysfunction-induced bone loss in mice**

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Estrogen deficiency can be caused by ovarian dysfunction in females. Mechanisms underlying osteoporosis in this condition have been characterized in animal models, such as ovariectomized mice and rats, although it remains unclear how hypothalamic dysfunction promotes osteoporosis. Here, we show that administration of a gonadotropin-releasing hormone antagonist (GnRHa) significantly decreases uterine weight, a manifestation of hypothalamic dysfunction, and promotes both cortical and trabecular bone loss in female mice *in vivo*. We also report that osteoclast number significantly increased in mice administered GnRHa, and that the transcription factor hypoxia inducible factor 1 alpha (HIF1 $\alpha$ ) accumulated in those osteoclasts. We previously reported that treatment of mice with the active vitamin D analogue ED71, also known as eldecalcitol, inhibited HIF1 $\alpha$  accumulation in osteoclasts. We show here that in mice, co-administration of ED71 with GnRHa significantly rescued the reduced cortical and trabecular bone mass promoted by GnRHa administration alone. GnRHa-dependent HIF1 $\alpha$  accumulation in osteoclasts was also blocked by co-administration of ED71. We conclude that hypothalamic dysfunction promotes HIF1 $\alpha$  accumulation in osteoclasts and likely results in reduced bone mass. We conclude that treatment with ED71 could serve as a therapeutic option to counter osteoporotic conditions in humans.

**BMC Musculoskelet Disord. 2021 Jan 23;22(1):105. doi: 10.1186/s12891-021-03960-z.**

## **Mortalidad en adultos mayores tras una fractura por fragilidad: estudio retrospectivo real de cohortes emparejadas en Ontario**

### **Mortality in older adults following a fragility fracture: real-world retrospective matched-cohort study in Ontario**

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Background: Recent studies are lacking reports on mortality after non-hip fractures in adults aged > 65. Methods: This retrospective, matched-cohort study used de-identified health services data from the publicly funded healthcare system in Ontario, Canada, contained in the ICES Data Repository. Patients aged 66 years and older with an index fragility fracture occurring at any osteoporotic site between 2011 and 2015 were identified from acute hospital admissions, emergency and ambulatory care using International Classification of Diseases (ICD)-10 codes and data were analyzed until 2017. Thus, follow-up ranged from 2 years to 6 years. Patients were excluded if they presented with an index fracture occurring at a non-osteoporotic fracture site, their index fracture was associated with a trauma code, or they experienced a previous fracture within 5 years prior to their index fracture. This fracture cohort was matched 1:1 to controls within a non-fracture cohort by date, sex, age, geography and comorbidities. All-cause mortality risk was assessed. Results: The survival probability for up to 6 years post-fracture was significantly reduced for the fracture cohort vs matched non-fracture controls ( $p < 0.0001$ ;  $n = 101,773$  per cohort), with the sharpest decline occurring within the first-year post-fracture. Crude relative risk of mortality (95% confidence interval) within 1-year post-fracture was

2.47 (2.38-2.56) in women and 3.22 (3.06-3.40) in men. In the fracture vs non-fracture cohort, the absolute mortality risk within one year after a fragility fracture occurring at any site was 12.5% vs 5.1% in women and 19.5% vs 6.0% in men. The absolute mortality risk within one year after a fragility fracture occurring at a non-hip vs hip site was 9.4% vs 21.5% in women and 14.4% vs 32.3% in men. Conclusions: In this real-world cohort aged > 65 years, a fragility fracture occurring at any site was associated with reduced survival for up to 6 years post-fracture. The greatest reduction in survival occurred within the first-year post-fracture, where mortality risk more than doubled and deaths were observed in 1 in 11 women and 1 in 7 men following a non-hip fracture and in 1 in 5 women and 1 in 3 men following a hip fracture.