



## Selección de Resúmenes de Menopausia

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### **The effect of vitamin D on the lipid profile as a risk factor for coronary heart disease in postmenopausal women: a meta-analysis and systematic review of randomized controlled trials -12**

Wen Zhang 1, Jian Yi 2, Dan Liu 3, Yuhong Wang 4, Parsa Jamilian 5, Mihnea-Alexandru Gaman 6, et al.

**Background and aim:** The exact effect of vitamin D administration on the lipid profile in postmenopausal women is unknown. However, as dyslipidemia is a recognized risk factor for coronary heart disease (CHD) in this population, the lipid-lowering effects of vitamin D need to be explored. Thus, we conducted a systematic review and meta-analysis of randomized controlled trials (RCTs) that evaluated the impact of vitamin D use on triglycerides (TG), high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C) and total cholesterol (TC) as a risk factor for coronary heart disease (CHD) in postmenopausal women. **Methods:** We developed a search strategy for multiple databases (PubMed/Medline, Scopus, Embase, and Web of Science) to identify relevant RCTs whose results were published until June 1st, 2021. We combined the results using a random effects model (the DerSimonian and Laird random effects model). Lipid profile outcomes were expressed as weighted mean difference (WMD) and 95% confidence intervals (CIs) between intervention and comparator groups. **Results:** Supplementation with vitamin D decreased TG (WMD: -3.55 mg/dL, 95% CI: -5.34 to -1.76,  $P < 0.001$ ) in postmenopausal females versus controls. In the subgroup analyses, vitamin D increased TC when the treatment duration was  $< 26$  weeks (WMD: 6.56 mg/dL, 95% CI: 0.78 to 12.35,  $P = 0.02$ ) as compared to  $\geq 26$  weeks (WMD: -2.06 mg/dL, 95% CI: -5.49, 1.36,  $P = 0.23$ ) and in the participants with a BMI  $\geq 30$  kg/m<sup>2</sup> (WMD: 3.65 mg/dL, 95% CI: 0.09, 7.22,  $P = 0.044$ ). Moreover, vitamin D increased HDL-C when the treatment duration was  $< 26$  weeks (WMD: 2.67 mg/dL, 95% CI: 0.66 to 4.68,  $P = 0.009$ ). In addition, vitamin D decreased LDL-C when the vitamin D dose was  $> 400$  IU/day (WMD: -1.89 mg/dL, 95% CI: -2.47 to -1.31,  $P < 0.001$ ) as compared to  $\leq 400$  IU/day (WMD: 2.50 mg/dL, 95% CI: -2.50, 7.52,  $P = 0.327$ ). **Conclusions:** Vitamin D administration on the lipid profile as a risk factor for CHD in postmenopausal women reduces TG. Its effects to lower LDL-C and increase HDL-C and TC levels are clinically negligible but should be investigated in future research. In addition, supplementation with vitamin D results in a clinically significant reduction in TG, particularly in postmenopausal females with hypertriglyceridemia at baseline.

**Menopause. 2021 Nov 15;29(2):239-246. doi: 10.1097/GME.0000000000001895.**

### **Factors associated with high placebo response in clinical studies of hot flashes: a meta-analysis**

Kentaro Miyazaki 1 2, Masayuki Kaneko 3, Mamoru Narukawa 1

**Importance:** High placebo response can often mask the evaluation of active treatment in clinical studies for women with hot flashes and potentially undermine the evaluation of new treatments. **Objective:** The aim of this meta-analysis was to determine the factors associated with high placebo response (defined as the reduction in the mean number of hot flash frequency from baseline) in randomized, controlled, double-blind studies enrolling women with hot flashes. **Evidence review:** To identify eligible studies, Embase, MEDLINE, and BIOSIS Previews were searched for English-language articles published between April 1975 and August 2020. Placebo-controlled, double-blind, randomized studies that assessed changes in hot flash frequency were included if they satisfied the defined criteria. We conducted univariate and multivariate analyses using categorical and numerical data. Categorical data included the following variables and levels in brackets: active treatment type (hormone therapy /non-hormone therapy /complementary and alternative medicine), administration route (oral/non-oral), study region (in/excluded the US), breast cancer population (in/excluded), entry criteria of hot flash severity (moderate to severe only/all included), parallel or crossover study, placebo run-in period before treatment (yes/no), and menopausal status (postmenopausal only/include perimenopausal/include premenopausal). Numerical data included published year, pretreatment period duration, treatment period duration, number of sites, number of total participants, number of placebo participants, number of treatment arms, mean age, BMI, and hot flash frequency at baseline. **Findings:** Forty-three of the 802 identified publications were included in the review. Multivariate analysis identified three individual factors associated with high

placebo response: treatment period duration, number of treatment arms, and BMI. Conclusions and relevance: We identified several factors associated with high placebo response in clinical studies of women with hot flashes. Knowing these factors may enable proactive implementation of operational and analytic strategies that further aid in determining the true treatment effect of an intervention.

**Hypertens. 2022 Jan 25. doi: 10.1097/HJH.0000000000003077. Online ahead of print.**

## **Hypertension and contraceptive use among women of child-bearing age in the United States from 2001 to 2018**

Lara C Kovell 1, Claire V Meyerovitz, Ekaterina Skaritanov, Didem Ayturk, Sharina D Person, et al.

Background: Hypertension (HTN) in pregnancy is a leading cause of maternal mortality in the United States. Contraception is widely used, and estrogen-based combined hormonal forms are known to increase blood pressure (BP). With nearly half of pregnancies unplanned and many antihypertensive medications teratogenic, appropriate contraception is critical in child-bearing age women with HTN. Methods: Using the National Health and Nutrition Examination Surveys (NHANES) from 2001 to 2018, we evaluated contraception and antihypertensive medication use in women of child-bearing age (20-50 years). Women who had undergone sterilization or menopause were excluded. HTN was defined based on a self-reported provider diagnosis and BP  $\geq$ 130/80 mm Hg or antihypertensive medication use. Contraception included non-barrier methods (pills/patch/ring, injections, long-acting reversible contraceptives) or consistent condom use. Multivariable logistic regression was used to model the odds of contraception use. Temporal trends in contraception use were reported. Results: Of the 8726 women, 12.4% had HTN with mean age (standard error) 36.0 (0.3) years. In women with HTN, 9.2% used non-barrier contraception and 10.4% used condoms only. Over half (52.7%) of women with HTN on antihypertensive medications were taking medications contraindicated in pregnancy, with no difference seen by contraceptive status. In logistic regression models, contraceptive use was lower in the older-aged women. In women with HTN on non-barrier contraception, combined hormonal contraceptive use declined, from 100% (2001-2006) to 81.4% (2013-2018,  $P < 0.001$ ). Conclusions: Many women with self-reported HTN are not using adequate contraception. Of the small proportion on non-barrier contraceptives, the majority are using estrogen-based, BP-raising methods.

**Appl Physiol Nutr Metab. 2022 Jan 26. doi: 10.1139/apnm-2021-0462. Online ahead of print.**

## **The Effects of Pilates on Health-related Outcomes in Individuals with Increased Risk of Fracture: A Systematic Review**

Emily Claire McLaughlin 1, Joan Bartley 2, Maureen C Ashe 3, Debra Butt 4, Philip D Chilibeck 5, et al.

This systematic review examined the effect of Pilates on health-related outcomes in individuals with increased fracture risk to inform the 2021 Clinical Practice Guidelines for Management of Osteoporosis and Fracture Prevention in Canada. Seven electronic databases were searched to December 2020. Studies of Pilates in men and postmenopausal women aged  $\geq$  50 years with low BMD, history of fragility fracture, or moderate-high risk of fragility fracture were included. Two reviewers independently screened studies and performed risk of bias assessment. Of 7286 records and 504 full-text articles, five studies were included, encompassing data from 143 participants (99% female). Data were insufficient for meta-analyses. There is low-certainty evidence that Pilates improved physical functioning and health-related quality of life. The effect of Pilates on falls and BMD is uncertain. No evidence was available for the effect of Pilates on mortality, fractures, or adverse events. Overall, Pilates may improve physical functioning and quality of life. Evidence of benefits relative to harms of Pilates in people with increased fracture risk, particularly males, is limited.

**Arch Osteoporos. 2022 Jan 26;17(1):23. doi: 10.1007/s11657-021-00969-8.**

## **Osteoporosis in Europe: a compendium of country-specific reports**

Carl Willers 1 2, Nicholas Norton 1, Nicholas C Harvey 3 4, Trolle Jacobson 1, Helena Johansson 5 6, et al.

This report describes epidemiology, burden, and treatment of osteoporosis in each of the 27 countries of the European Union plus Switzerland and the UK (EU 27+2). Introduction: The aim of this report was to characterize the burden of osteoporosis in each of the countries of the European Union plus Switzerland and the UK in 2019 and beyond. Methods: The data on fracture incidence and costs of fractures in the EU27+2 was taken from a concurrent publication in this journal (SCOPE 2021: a new scorecard for osteoporosis in Europe) and country-specific information extracted. The information extracted covered four domains: burden of osteoporosis and fractures; policy framework; service provision;

and service uptake. Results: The clinical and economic burden of osteoporotic fractures in 2019 is given for each of the 27 countries of the EU plus Switzerland and the UK. Each domain was ranked and the country performance set against the scorecard for all nations studied. Data were also compared with the first SCOPE undertaken in 2010. Fifteen of the 16 score card metrics on healthcare provision were used in the two surveys. Scores had improved or markedly improved in 15 countries, remained constant in 8 countries and worsened in 3 countries. The average treatment gap increased from 55% in 2010 to 71% in 2019. Overall, 10.6 million women who were eligible for treatment were untreated in 2010. In 2019, this number had risen to 14.0 million. Conclusions: In spite of the high cost of osteoporosis, a substantial treatment gap and projected increase of the economic burden driven by aging populations, the use of pharmacological prevention of osteoporosis has decreased in recent years, suggesting that a change in healthcare policy concerning the disease is warranted.

**World J Diabetes. 2022 Jan 15;13(1):5-26. doi: 10.4239/wjd.v13.i1.5.**

### **Polycystic ovary syndrome and type 2 diabetes mellitus: A state-of-the-art review**

Sarantis Livadas 1, Panagiotis Anagnostis 2, Julia K Bosdou 3, Dimitra Bantouna 4, Rodis Papanodis 5

Polycystic ovary syndrome (PCOS) often coexists with a wide spectrum of dysglycemic conditions, ranging from impaired glucose tolerance to type 2 diabetes mellitus (T2D), which occur to a greater extent compared to healthy body mass index-matched women. This concurrence of disorders is mainly attributed to common pathogenetic pathways linking the two entities, such as insulin resistance. However, due to methodological flaws in the available studies and the multifaceted nature of the syndrome, there has been substantial controversy as to the exact association between T2D and PCOS which has not yet been elucidated. The aim of this review is to present the best available evidence regarding the epidemiology of dysglycemia in PCOS, the unique pathophysiological mechanisms underlying the progression of dysglycemia, the most appropriate methods for assessing glycemic status and the risk factors for T2D development in this population, as well as T2D risk after transition to menopause. Proposals for application of a holistic approach to enable optimal management of T2D risk in PCOS are also provided. Specifically, adoption of a healthy lifestyle with adherence to improved dietary patterns, such the Mediterranean diet, avoidance of consumption of endocrine-disrupting foods and beverages, regular exercise, and the effect of certain medications, such as metformin and glucagon-like peptide 1 receptor agonists, are discussed. Furthermore, the maintenance of a healthy weight is highlighted as a key factor in achievement of a significant reduction of T2D risk in women with PCOS.

**Steroids. 2022 Jan 20;108966. doi: 10.1016/j.steroids.2022.108966. Online ahead of print.**

### **Does tibolone treatment have favorable effects on obesity, blood pressure, and inflammation? A meta-analysis of randomized controlled trials**

Qi Yuan 1, Heitor O Santos 2, Majed Saeed Alshahrani 3, Saeed Baradwan 4, HongShu Ju 5

The clinical effects of tibolone on cardiometabolic markers are an underlying question in postmenopausal women. We aimed to meta-analyze the effects of tibolone on anthropometric indicators of obesity, blood pressure (BP), and on C-reactive protein (CRP) levels in postmenopausal women. Two independent reviewers searched Scopus, Web of Science, PubMed/Medline, and Embase up to until 20 April 2021. Weighted mean differences (WMDs) and 95% confidence interval (CI) were calculated through the DerSimonian and Laird random-effect models between the tibolone and the control groups. Data from 20 eligible included showed that tibolone treatment increased the body mass index (BMI) by 0.23 kg/m<sup>2</sup> (95% CI: 0.017 to 0.45, p=0.03) but did not significantly increase body weight (WMD: 1.128 kg, 95% CI: -1.76 to 4.02, p=0.44) or waist circumference (WC) (WMD: 0.64 cm, 95% CI: -3.18 to 4.48, p = 0.74). Also, tibolone treatment neither changed the systolic BP (WMD: 2.60 mmHg, 95% CI: -2.52 to 7.72, p = 0.31) nor the diastolic BP (WMD: 0.711 mmHg, 95% CI: -2.52 to 3.94, p = 0.66), but increased CRP levels by 0.44 mg/L (95% CI: 0.10 to 0.78, p = 0.01). Tibolone treatment administered in postmenopausal women increased BMI and CRP but did not change body weight, WC, and SBP. Diastolic BP decreased after the tibolone intervention only in the studies lasting 26 weeks versus >26 weeks.

**Int J Gynaecol Obstet. 2022 Jan 22. doi: 10.1002/ijgo.14110. Online ahead of print.**

### **Appropriateness of hysterectomies at the time of surgical removal of presumed benign adnexal masses**

Carole Barake 1, Rula Atwani 2, Narjes Jaafar 2, Hani Tamim 3, Elie Hobeika 1, Dina J Chamsy 1

Objective: To evaluate factors that affect gynecologists' decision to remove an asymptomatic uterus at the time of removal of a presumed benign adnexal mass. Methods: Retrospective chart review of hysterectomies conducted when removing presumed benign adnexal masses at a tertiary care academic center. Primary outcome was the final pathology of the adnexal mass to determine whether the hysterectomy was medically indicated. Secondary outcomes included the rate of postoperative complications. Results: We included 185 out of 1415 charts. Most hysterectomies were done by Gynecologic Oncologists (68.8%). 61% had a frozen section and of those 67.3% were benign. Final adnexal pathology was benign in 73% of all cases. Using a bivariate analysis, menopausal status ( $p=0.019$ ), parity ( $p=0.047$ ), sonographic appearance of the mass ( $p=0.049$ ) and the physician's preoperative suspicion for malignancy ( $p<0.001$ ) were significantly associated with the final adnexal pathology. At the multivariate level, only the physician's suspicion for malignancy was significantly associated with the final adnexal pathology ( $p<0.0001$ ) with an odds ratio of 7.28 (95% confidence interval 3.11 - 17.02). Conclusion: Despite gynecologists' capacity at predicting the malignant nature of an adnexal mass, 73% of hysterectomies were performed without a clear medical indication, at the time of removal of benign adnexal masses.