



Selección de Resúmenes de Menopausia

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Georgian Med News. 2016 Jun;(255):45-51.

Estrogen related mechanisms of hypertension in menopausal women.

Buleishvili M, Lobjanidze N, Ormotsadze G, Enukidze M, Machavariani M, Sanikidze T.

The aim of our investigation was to establish the role of estrogens in the pathogenesis of hypertension during menopause. Menopausal women (40-55 years) with hypertension who had been admitted to "The N. Kipshidze Central University Clinic" (Tbilisi, Georgia) during 2011-2015 and without hypertension were investigated. Essential hypertension was defined as elevated blood pressure while in a sitting position, exceeding $160\pm 10/90\pm 10$ mm Hg $60/95$ mm Hg, for three consecutive measurements over a period of at least 4 weeks. Determination and verification of menopause was provided based on the criteria of at least 12 months of amenorrhea. All the patients had given their informed consent before any procedure. Study protocol was approved by Local Ethical Committee of Davit Agmashenebeli University. In each group blood content of estradiol, free nitric oxide (NO) and nitrosilated hemoglobin (HbNO), endothelin-1 and angiotensin II (ANG) were investigated. Decrease free nitric oxide (NO) (by 10%) and increase in endothelin-1 (by 14%) and Angiotensin II (ANG) (by 12%) content in the blood of menopausal women with hypertension were identified. In some patients with hypertension it was detected low intensity of NOHb EPR signal in blood ($\sim 1,5\pm 0,07$ mm/mg). In blood of hypertensive postmenopausal women there was revealed statistically significant correlation between estrogen level and NO content ($r=-0,7935$, $p=0,0061$), estrogen level and ANG II content ($r=-0,7080$, $p=0,0328$), statistically nonsignificant dependence between NOHb EPR signal intensity and estradiol content ($r=-0,29$, $p=0,12$). In normotensive postmenopausal women correlation between blood estrogen and NO level, blood estrogen and ANGII level was not statistically significant ($r=-0,4342$, $p=0,2429$; $r=-0,2676$, $p=0,4547$). These data indicate that in postmenopausal women in the regulation of arterial pressure in addition to the estrogens involve other factors, like as was shown in our previous investigation, oxidative stress. The results of our studies indicate on the complexity mechanisms of hypertension in postmenopausal women. Identification of these factors, including their cause-effect relations, is necessary for the timely prevention and effective correction of hypertension in postmenopausal women.

J Gerontol A Biol Sci Med Sci. 2016 Jul 20. pii: glw134. [Epub ahead of print]

Low Birth Weight and Risk of Later-Life Physical Disability in Women.

Spracklen CN, Ryckman KK, Robinson JG, Stefanick ML, Sarto GE, Anton SD, Wallace RB.

BACKGROUND: There is strong evidence that low and high birth weight due to in-utero programming results in elevated risk for adult diseases, though less research has been performed examining the influence of birth weight and physical disability later in life. **METHODS:** Baseline data from 76,055 postmenopausal women in the Women's Health Initiative, a large multi-ethnic cohort, were used to examine the association between self-reported birth weight category (<6 lbs, 6-7 lbs 15 oz, 8-9 lbs 15 oz, and ≥ 10 lbs) and the self-reported physical functioning score on the RAND 36-item Health Survey. Linear regression models were adjusted for age, education, race/ethnicity, body mass index, and a comorbidity score. **RESULTS:** Unadjusted models indicate that women born in the lowest and highest birth weight categories have significantly lower physical functioning scores as compared to women born in the normal weight category ($\beta = -2.22$, $p < .0001$ and $\beta = -3.56$, $p < .0001$, respectively). After adjustments, the relationship between the lowest birth weight category and physical functioning score remained significant ($\beta = -1.52$, $p < .0001$); however, the association with the highest birth weight category dissipated. **CONCLUSIONS:** Preconception and prenatal interventions aimed at reducing the incidence of low birth weight infants may subsequently reduce the burden of later-life physical disability.

J Bone Joint Surg Am. 2016 Jul 20;98(14):1176-82. doi: 10.2106/JBJS.15.00963.

Postural Stability in Older Adults with a Distal Radial Fracture.

Louer CR, Boone SL, Guthrie AK, Motley JR, Calfee RP, Wall LB.

BACKGROUND: The physical risk factors leading to distal radial fractures are poorly understood. The goal of this study was to compare postural stability between older adults with and without a prior distal radial fragility fracture.

METHODS: This case-control evaluation was performed at a single tertiary institution. The fracture cohort comprised 23 patients treated for a low-energy distal radial fracture within 6 to 24 months prior to this study. Twenty-three age and sex-matched control participants, without a prior fragility fracture, were selected from an outpatient clinic population. All participants completed a balance assessment with a computerized balance platform device. Dynamic motion analysis (DMA) scores ranging from 0 to 1,440 points are produced, with lower scores indicating better postural stability. Participants also completed validated questionnaires for general health quality (EuroQol-5D-3L [EQ-5D-3L]) and physical activity (Physical Activity Scale for the Elderly [PASE]) and comprehensive health and demographic information including treatment for compromised balance or osteoporosis. Statistical analysis compared data between cases and controls using either the Student t test or the Mann-Whitney U test. **RESULTS:** There were no significant differences ($p > 0.05$) in age, sex, body mass index, physical activity score, or EQ-5D-3L general health visual analog scale score between participants with or without prior distal radial fracture. The fracture cohort demonstrated poorer balance, with higher DMA scores at 933 points compared with 790 points for the control cohort ($p = 0.008$). Nineteen patients (83%) in the fracture cohort reported having dual x-ray absorptiometry (DXA) scans within 5 years prior to this study, but only 2 patients (9%) had ever been referred for balance training with physical therapy. **CONCLUSIONS:**

Older adults who sustain low-energy distal radial fractures demonstrate impaired postural stability compared with individuals of a similar age who have not sustained such fractures. Following a distal radial fracture, these patients may benefit from interventions to improve postural stability.

Nutr Res. 2016 Apr 26;36(8):845-854. doi: 10.1016/j.nutres.2016.04.008. [Epub ahead of print]

The Western dietary pattern is associated with increased serum concentrations of free estradiol in postmenopausal women: implications for breast cancer prevention.

Sánchez-Zamorano LM, Flores-Luna L, Angeles-Llerenas A, Ortega-Olvera C, Lazcano-Ponce E, et al.

Little is known about the possible influence of food consumption on the serum concentrations of endogenous sex hormones in postmenopausal women. We evaluated the relationships of the Western dietary pattern with serum concentrations of free estradiol and testosterone of postmenopausal women to test the hypothesis that a highly Western dietary pattern is associated with high serum concentrations of these hormones. We used data from a representative subsample of 305 women from the control group of a population-based case-control study conducted in Mexico from 2004 to 2007. A Western dietary pattern index value was compared with log natural serum concentrations of testosterone and estradiol using multiple linear regression models. The median values of serum concentrations of free estradiol and testosterone were 0.26 pg/mL (interquartile range, 0.14-0.43) and 0.40 pg/mL (interquartile range, 0.30-0.70), respectively. A multiple linear regression model showed that for each unit increase in the Western dietary pattern index, there was a 16.2% increase in the serum concentrations of free estradiol ($\beta=0.15$; 95% confidence interval [CI], 0.01-0.29); for each additional serving per week of chicken eggs, the increase was 31.0% ($\beta=0.27$; 95% CI, 0.106-0.441); for each additional serving per week of red meat, the increase was 64.9% ($\beta=0.50$; 95% CI, 0.01-1.01). There was no relationship found between dietary patterns and serum concentrations of free testosterone. The present findings suggest that intake of a Western diet, particularly of chicken eggs and meat, increases serum concentrations of free estradiol; these results have implications for breast cancer prevention.

Reprod Sci. 2016 Jul 19. pii: 1933719116658705. [Epub ahead of print]

Involvement of Luteinizing Hormone in Alzheimer Disease Development in Elderly Women.

Rao CV.

Alzheimer disease (AD) is a slow progressive neurodegenerative disease that affects more elderly women than elderly men. It impairs memory, typically progresses into multidomain cognitive decline that destroys the quality of life, and ultimately leads to death. About 5.3 million older Americans are now living with this disease, and this number is projected to rise to 14 million by 2050. Annual health-care costs in the United States alone are projected to increase to about US\$1.1 trillion by 2050. The initial theory that decreasing estrogen levels leads to AD development in postmenopausal women has been proven inconclusive. For example, Women's Health Research Initiative Memory Study and the population-based nested case-control study have failed to demonstrate that estrogen/progesterone (hormone replacement therapy [HRT]) or estrogen replacement therapy could prevent the cognitive decline or reduce

the risk of AD. This led to the realization that AD development could be due to a progressive increase in luteinizing hormone (LH) levels in postmenopausal women. Accordingly, a large number of studies have demonstrated that an increase in LH levels is positively correlated with neuropathological, behavioral, and cognitive changes in AD. In addition, LH has been shown to promote amyloidogenic pathway of precursor protein metabolism and deposition of amyloid β plaques in the hippocampus, a region involved in AD. Cognate receptors that mediate LH effects are abundantly expressed in the hippocampus. Reducing the LH levels by treatment with gonadotropin-releasing hormone agonists could provide therapeutic benefits. Despite these advances, many questions remain and require further research.

Obes Rev. 2016 Jul 19. doi: 10.1111/obr.12443. [Epub ahead of print]

Central obesity and risks of pre- and postmenopausal breast cancer: a dose-response meta-analysis of prospective studies.

Chen GC, Chen SJ, Zhang R, Hidayat K, Qin JB, Zhang YS, Qin LQ.

Epidemiologic evidence has shown inconsistent findings regarding the relationships between abdominal fatness, as measured by waist circumferences (WC) or waist-to-hip ratio (WHR), and risks of pre- and postmenopausal breast cancer (BC). A dose-response meta-analysis of prospective studies was conducted to address these issues. Potentially eligible studies were identified by searching PubMed and EMBASE databases, and by carefully reviewing the bibliographies of retrieved publications and related reviews. The summary relative risks (RRs) with 95% confidence intervals (CIs) were calculated using a random-effects model. When the most fully adjusted RRs were combined, both WC (14 studies, RR per 10-cm increase = 1.06, 95% CI: 1.04-1.09, I² = 29.9%) and WHR (15 studies, RR per 0.1-unit increase = 1.07, 95% CI: 1.01-1.14, I² = 52.9%) were significantly positively associated with postmenopausal BC, but neither WC (eight studies, RR per 10-cm increase = 1.05, 95% CI: 0.99-1.10, I² = 0%) nor WHR (11 studies, RR per 0.1-unit increase = 1.07, 95% CI: 0.95-1.21, I² = 59.7%) were associated with premenopausal BC. The WHR-postmenopausal BC association lost statistical significance after correcting publication bias (RR per 0.1-unit increase = 1.06, 95% CI: 0.99-1.13). When considering BMI-adjusted RRs, WC was associated with both pre- (five studies, RR per 10-cm increase = 1.09, 95% CI: 1.02-1.16, I² = 0%) and postmenopausal BC (seven studies, RR per 10-cm increase = 1.05, 95% CI: 1.02-1.08, I² = 6.3%), whereas WHR was not associated with either pre- (seven studies, RR per 0.1-unit increase = 1.12, 95% CI: 0.94-1.34, I² = 70.9%) or postmenopausal BC (eight studies, RR per 0.1-unit increase = 1.05, 95% CI: 0.98-1.13, I² = 57.3%). Among non-current (former or never) users of hormone replacement therapy, the summary RR per 10-cm increase of postmenopausal BC associated with WC was 1.08 (95% CI: 1.03-1.05, I² = 69.2%, seven studies; BMI-adjusted RR = 1.05, 95% CI: 1.02-1.09, I² = 22.8%, four studies). This meta-analysis indicates that central obesity measured by WC, but not by WHR, is associated with modestly increased risks of both pre- and postmenopausal BC independent of general obesity.

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Influence of nutrition on the decline of ovarian reserve and subsequent onset of natural menopause.

Pearce K, Tremellen K.

The early loss of ovarian reserve and subsequent menopause has a major impact on fertility potential and increases the risk of cardiovascular disease, osteoporosis, cognitive decline and mortality later in life. While many studies have reported that lifestyle factors such as diet can influence the age of onset of natural menopause, their results are often contradictory. Therefore, the aim of this study was to examine the influence of diet on the onset of natural menopause using a self-reported food frequency questionnaire in a cohort of 1146 pre-menopausal women followed up for an average of 12.5 years. The primary finding was that the age of natural menopause was positively correlated with dietary intake of the micronutrient β -cryptoxanthin ($r_2 = 0.105$, $p < 0.001$) and fruit ($r_2 = 0.07$, $p = 0.01$), with these relationships remaining significant even after adjustment for other known co-variants for onset of menopause (parity, BMI, physical activity level, education, smoking, energy and alcohol intake). Kaplan-Meier survival analysis confirmed that both β -cryptoxanthin and fruit intake was associated with a significant delay in the onset of natural menopause. While still acknowledging that further research is required, in the interim we would advocate that a diet containing ~400 mcg of β -cryptoxanthin per day from fruits (mandarins, oranges and peaches) has significant potential to delay ovarian senescence by 1.3 years.