



## Selección de Resúmenes de Menopausia

Semana del 3 al 9 de Enero de 2018

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### **Lower Lean Mass Measured by Dual-Energy X-ray Absorptiometry (DXA) is Not Associated with Increased Risk of Hip Fracture in Women: The Framingham Osteoporosis Study.**

McLean RR, Kiel DP, Berry SD, Broe KE, Zhang X, Cupples LA, Hannan MT.

Although muscle mass influences strength in older adults, it is unclear whether low lean mass measured by dual-energy X-ray absorptiometry (DXA) is an independent risk factor for hip fracture. Our objective was to determine the association between DXA lean mass and incident hip fracture risk among 1978 women aged 50 years and older participating in the Framingham Study Original and Offspring cohorts. Leg and total body lean mass (kg) were assessed from whole-body DXA scans collected in 1992-2001. Hip fracture follow-up extended from DXA assessment to the occurrence of fracture, death, drop-out, or end of follow-up in 2007. Cox proportional hazards regression was used to calculate hazard ratios (HR) and 95% confidence intervals (CI) estimating the relative risk of hip fracture associated with a 1-kg increase in baseline lean mass. Mean age was 66 years (range 50-93). Over a median of 8 years of follow-up, 99 hip fractures occurred. In models adjusted for age, height, study cohort, and percent total body fat, neither leg (HR 1.11; 95% CI 0.94, 1.31) nor total body (HR 1.06; 95% CI 0.99, 1.13) lean mass were associated with hip fracture. After further adjustment for femoral neck bone mineral density, leg lean mass results were similar (HR 1.10; 95% CI 0.93, 1.30). In contrast, 1 kg greater total body lean mass was associated with 9% higher hip fracture risk (HR 1.09; 95% CI 1.02, 1.18). Our findings suggest that in women, lower lean mass measured by DXA is not associated with increased risk of hip fracture.

**BMC Geriatr. 2018 Jan 5;18(1):4. doi: 10.1186/s12877-017-0692-0.**

### **Osteoporotic fractures and obesity affect frailty progression: a longitudinal analysis of the Canadian multicentre osteoporosis study.**

Gajic-Veljanoski O, Papaioannou A, Kennedy C, Ioannidis G, Berger C, Wong AKO, Rockwood K, et al.

**BACKGROUND:** Despite knowing better how to screen older adults, understanding how frailty progression might be modified is unclear. We explored effects of modifiable and non-modifiable factors on changes in frailty in community-dwelling adults aged 50+ years who participated in the Canadian Multicentre Osteoporosis Study (CaMos). **METHODS:** Rates of change in frailty over 10 years were examined using the 30-item CaMos Frailty Index (CFI). Incident and prevalent low-trauma fractures were categorized by fracture site into hip, clinical vertebral and non-hip-non-vertebral fractures. Multivariable generalized estimating equation models accounted for the time of frailty assessment (baseline, 5 and 10 years), sex, age, body mass index (BMI, kg/m<sup>2</sup>), physical activity, bone mineral density, antiresorptive therapy, health-related quality of life (HRQL), cognitive status, and other factors for frailty or fractures. Multiple imputation and scenario analyses addressed bias due to attrition or missing data. **RESULTS:** The cohort included 5566 women (mean  $\pm$  standard deviation: 66.8  $\pm$  9.3 years) and 2187 men (66.3  $\pm$  9.5 years) with the mean baseline CFI scores of 0.15  $\pm$  0.11 and 0.12  $\pm$  0.10, respectively. Incident fractures and obesity most strongly predicted frailty progression in multivariable analyses. The impact of fractures differed between the sexes. With each incident hip fracture, the adjusted mean CFI accelerated per 5 years by 0.07 in women (95% confidence interval [CI]: 0.03 to 0.11) and by 0.12 in men (95% CI: 0.08 to 0.16). An incident vertebral fracture increased frailty in women (0.05, 95% CI: 0.02 to 0.08) but not in men (0.01, 95% CI: -0.07 to 0.09). Irrespective of sex and prevalent fractures, baseline obesity was associated with faster frailty progression: a 5-year increase in the adjusted mean CFI ranged from 0.01 in overweight (BMI: 25.0 to 29.9 kg/m<sup>2</sup>) to 0.10 in obese individuals (BMI:  $\geq$  40 kg/m<sup>2</sup>). Greater physical activity and better HRQL decreased frailty over time. The results remained robust in scenario analyses. **CONCLUSIONS:** Older women and men with new vertebral fractures, hip fractures or obesity represent high-risk groups that should be considered for frailty interventions.

**Am J Hum Genet. 2018 Jan 4;102(1):88-102. doi: 10.1016/j.ajhg.2017.12.005.**

## Life-Course Genome-wide Association Study Meta-analysis of Total Body BMD and Assessment of Age-Specific Effects.

Medina-Gomez C, Kemp JP, Trajanoska K, Luan J, Chesi A, Ahluwalia TS, Mook-Kanamori DO, et al.

Bone mineral density (BMD) assessed by DXA is used to evaluate bone health. In children, total body (TB) measurements are commonly used; in older individuals, BMD at the lumbar spine (LS) and femoral neck (FN) is used to diagnose osteoporosis. To date, genetic variants in more than 60 loci have been identified as associated with BMD. To investigate the genetic determinants of TB-BMD variation along the life course and test for age-specific effects, we performed a meta-analysis of 30 genome-wide association studies (GWASs) of TB-BMD including 66,628 individuals overall and divided across five age strata, each spanning 15 years. We identified variants associated with TB-BMD at 80 loci, of which 36 have not been previously identified; overall, they explain approximately 10% of the TB-BMD variance when combining all age groups and influence the risk of fracture. Pathway and enrichment analysis of the association signals showed clustering within gene sets implicated in the regulation of cell growth and SMAD proteins, overexpressed in the musculoskeletal system, and enriched in enhancer and promoter regions. These findings reveal TB-BMD as a relevant trait for genetic studies of osteoporosis, enabling the identification of variants and pathways influencing different bone compartments. Only variants in *ESR1* and close proximity to *RANKL* showed a clear effect dependency on age. This most likely indicates that the majority of genetic variants identified influence BMD early in life and that their effect can be captured throughout the life course.

## Ann Pediatr Endocrinol Metab. 2017 Dec;22(4):226-230. doi: 10.6065/apem.2017.22.4.226. Epub 2017 Dec 31. Diagnostic and therapeutic considerations in Turner syndrome.

Yang S.

### Free article

Newly developed genetic techniques can reveal mosaicism in individuals diagnosed with monosomy X. Noninvasive prenatal diagnosis using maternal blood can detect most fetuses with X chromosome abnormalities. Low-dose and ultralow-dose estrogen replacement therapy can achieve a more physiological endocrine milieu. However, many complicated and controversial issues with such treatment remain. Therefore, lifetime observation, long-term studies of health problems, and optimal therapeutic plans are needed for women with Turner syndrome. In this review, we discuss several diagnostic trials using recently developed genetic techniques and studies of physiological hormone replacement treatment over the last 5 years.

## Vestn Ross Akad Med Nauk. 2016;71(3):248-54. doi: 10.15690/vramn629.

## Gender Features of Radical Oxidation of Lipids in Menopausal Women and Men in Andropause.

Kolesnikova LI, Madaeva IM, Semenova NV, Osipova EV, Darenskaya MA.

**Aims:** Our aim was to assess lipid peroxidation — antioxidant protection in menopausal women and men in andropause and to compare these processes in different gender and age groups. **Materials and Methods:** 74 women and 37 men were examined. This study was a prospective, randomized cohort study. Women were divided into perimenopausal group (n=22, mean age 49.03±3.13), postmenopausal group (n=15, mean age 54.43±4.54) and control (n=37, mean age 34±1.2). Men were divided into a group of andropause (n=20, mean age 50.38±2.63) and control (n=17, mean age 35.21±4.75). Body mass index in the main and control groups was comparable. Questionnaires, clinical examination, assessment of the lipid peroxidation-antioxidant defense system, and the calculation of oxidative stress ratio were conducted to all participants of the study. **Results:** In women from the reproductive phase transition to its extinction increases content of compounds with conjugated double bonds by 22% (p<0.05) in perimenopause and by 27% (p<0.05) in postmenopause, increases content of the ketodienes and coupled trienes by 21% (p<0.05) in perimenopause relative to the control group and reduced by 27% (p<0.05) in postmenopausal women relative to the group of perimenopause. The antioxidant system in women observed the following changes: decrease in the  $\alpha$ -tocopherol levels in postmenopausal women by 37% relative to control and by 22% (p<0.05) to compare perimenopause; reduction of retinol level by 29% (p<0.05) in the perimenopause and by 39% (p<0.05) in postmenopause relative to control, increasing of the content of GSSG by 18% (p<0.05) in postmenopause to compare control. When comparing groups of men statistically significant differences were not found. When comparing the groups according to gender, we revealed in men the increased content of compounds with conjugated double bonds by 38% (p<0.05), the GSSG by 13% (p<0.05), reduced content of the ketodienes and

coupled trienes by 43% ( $p<0.05$ ),  $\alpha$ -tocopherol by 24% ( $p<0.05$ ), SOD activity by 9% ( $p<0.05$ ). Coefficient oxidative stress in perimenopausal women was 2,5, in postmenopausal — 3,48, in andropause — 0,97. Conclusions: Expressed lipid peroxidation activity is more physiological in andropause than in menopause. Men in andropause have large functional reserves and adaptive capacity than menopausal women.

**J Cancer. 2018 Jan 1;9(1):141-147. doi: 10.7150/jca.21187. eCollection 2018.**

### **Opportunistic salpingectomy at benign gynecological surgery for reducing ovarian cancer risk: a 10-year single centre experience from China and a literature review.**

Chen Y, Du H, Bao L, Liu W.

Current evidences indicate that the fallopian tube plays a major role in the pathogenesis of epithelial ovarian cancer (EOC). Salpingectomy represents a novel and potentially effective risk-reducing option. In this study, there were 1822 patients diagnosed and treated for EOC or primary peritoneal cancer (PPC) at Department of Gynecologic Oncology, Tianjin Medical University Cancer Institute and Hospital from January 1, 2007 to April 30, 2017. Among them, 198 patients with a history of gynecological surgery because of benign diseases were enrolled to analyze further. Using 1:2 case-control study, we found that the incidence of EOC was significantly decreased in the population with salpingectomy, compared to women with fallopian tube reserved ( $P<0.05$ ). At the same period, there were 4339 patients receiving opportunistic salpingectomy in our centre because of benign gynecological diseases. The results showed the rate of bilateral salpingectomy was annually increased from 2007 to 2017 (22.02% to 60.22%), which showed approximately threefold increase in a decade. In general, factors affecting the rate of salpingectomy included age, child number, menopause or not, marital status, educational status, income status, and with or without family history of tumor. Therefore, based on ten years experiences from our centre, it is recommended that physician should discuss with appropriate patients to perform opportunistic bilateral salpingectomy at the time of receiving benign gynecological surgery for preventing ovarian cancer. Moreover, the prospective, large scale and multi-centre studies to evaluate the safety and efficacy of salpingectomy as a preventive strategy for ovarian cancer warrant to conduct in the future.

**Maturitas. 2018 Feb;108:7-12. doi: 10.1016/j.maturitas.2017.11.005. Epub 2017 Nov 11.**

### **Variation in symptoms of depression and anxiety in midlife women by menopausal status.**

Mulhall S, Andel R, Anstey KJ.

**OBJECTIVES:** To examine the association between menopausal status and the risk of symptoms of depression and anxiety in a community-based sample of Australian midlife women. **STUDY DESIGN:** Female participants (mean age  $50.6\pm 1.5$ ) who were premenopausal ( $n=237$ ), perimenopausal ( $n=249$ ) or naturally postmenopausal ( $n=225$ ) were drawn from the Personality and Total Health (PATH) Through Life Project, a longitudinal study. **MAIN OUTCOME MEASURES:** Symptoms of depression and anxiety were measured using the Goldberg Depression Scale and Goldberg Anxiety Scale. Generalised linear regression models with a negative binomial log link were used. **RESULTS:** Relative to premenopause and after adjusting for all relevant covariates, being perimenopausal was associated with increased risk of greater symptoms of depression (incidence rate ratio [IRR]=1.29,  $p=0.001$ ), while being postmenopausal was associated with increased risk of greater symptoms of anxiety (IRR=1.15,  $p=0.041$ ). Being perimenopausal or postmenopausal was associated with an increased risk of greater symptoms of depression (IRR=1.35,  $p=0.008$ ; IRR=1.31,  $p=0.029$ ) and anxiety (IRR=1.22,  $p=0.030$ ; IRR=1.32,  $p=0.006$ ) in women without a history of probable major depressive disorder or generalised anxiety disorder. Risk of symptoms did not differ with menopausal status in women with this history. **CONCLUSIONS:** Menopausal status is associated with the risk of symptoms of depression and anxiety. There is a greater likelihood of increased symptoms of depression during perimenopause and symptoms of anxiety during postmenopause. In women without a history of depression or anxiety, the perimenopause and postmenopausal stages are associated with increased risk of greater symptoms of anxiety and depression relative to premenopause.

**Maturitas. 2018 Feb;108:31-36. doi: 10.1016/j.maturitas.2017.11.009. Epub 2017 Nov 11.**

### **The sexual health approach in postmenopause: The five-minutes study.**

Cuerva MJ, Gonzalez D, Canals M, Otero B, Espinosa JA, Molero F, Senturk LM, Mendoza N.

**OBJECTIVES:** To determine whether actively addressing sexuality in a gynaecological consultation with menopausal patients improves the diagnosis of sexual problems. **STUDY DESIGN:** A multi-centre analytical cross-sectional study was conducted at 12 Spanish hospitals. In gynaecological consultations the usual medical histories were taken, except that, initially, issues relating to sexuality were omitted, unless the patients raised them. Then, after 5min, gynaecologists offered the possibility of talking about sexuality and asked about possible sexual problems. **Main outcome measures** Observed prevalence of sexual problems. **RESULTS:** A total of 256 postmenopausal women participated in the study. Of them, 12.1% reported a sexual problem during the first 5 minutes of the interview. The prevalence of patients with a sexual problem increased by 35.9% (from 12.1% to 48.0%) when they were asked about sexuality after 5min ( $p<0.0001$ ). The main factors associated with having a sexual problem were genitourinary syndrome of menopause (GSM) and having a stable sexual partner. **CONCLUSIONS:** Asking postmenopausal women about sexuality in gynaecological consultations is an important tool that increases the number of diagnoses of sexual problems. Gynaecologists should routinely ask about sexuality.

**Maturitas. 2018 Feb;108:18-23. doi: 10.1016/j.maturitas.2017.11.007. Epub 2017 Nov 10.**

### **The most bothersome symptom of vaginal atrophy: Evidence from the observational AGATA study.**

Palma F, Xholli A, Cagnacci A; as the writing group of the AGATA study.

**OBJECTIVES:** Vaginal atrophy (VA) is a chronic medical condition. It is managed unsatisfactorily, despite its high prevalence and negative impact on female quality of life. In order to meet their needs, it would be useful to know what women perceive to be the most bothersome symptom (MBS) of VA. **STUDY DESIGN:** Cross-sectional, multicenter study of 913 postmenopausal women consulting 22 gynecological outpatient services. **MAIN OUTCOMEMEASURES:** Prevalence of the MBS perceived by postmenopausal women of different age and vaginal condition. **RESULTS:** Vaginal dryness was the most prevalent MBS (54.4%), followed by dyspareunia (17.6%), itching (7.8%), dysuria (5.9%) and burning (2.0%). The prevalence of vaginal dryness as the MBS increased with years since menopause, while that of itching, dysuria and burning remained approximately constant over time. The prevalence of dyspareunia as the MBS was 26.2% in the first 6 years after menopause and declined thereafter, to 8.8%. **CONCLUSIONS:** Among all postmenopausal women vaginal dryness per se, independent of dyspareunia, is the most commonly reported MBS. In each woman, the identification of the MBS may help to define more appropriate VA management.