

## Selección de Resúmenes de Menopausia

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### **Racial differences in body composition and cardiometabolic risk during the menopause transition: a prospective, observational cohort study.**

Marlatt KL1, Redman LM2, Beyl RA2, Smith SR3, Champagne CM2, Yi F4, Lovejoy JC5.

**BACKGROUND:** Obesity disproportionately affects more women than men. The loss of ovarian function during the menopause transition coincides with weight gain, increases in abdominal adiposity, and impaired metabolic health. Racial differences in obesity prevalence that results from the menopause transition are not well understood. **OBJECTIVES:** To assess longitudinal changes in body composition and cardiometabolic risk among Black and White women during the menopausal transition. **STUDY DESIGN:** In a secondary analysis of a prospective, observational cohort study-the Healthy Transitions study-161 women aged 43 years and older with body mass index between 20 and 40 kg/m<sup>2</sup> and who had not yet transitioned through menopause were enrolled at Pennington Biomedical Research Center. Women were seen annually for body composition by dual-energy X-ray absorptiometry; abdominal adipose tissue distribution by computed tomography; sex steroid hormones; and cardiometabolic risk factors including fasting glucose, insulin, and lipids. Surrogate measures of insulin sensitivity were also calculated. **RESULTS:** Ninety-four women (25 Black, 69 White) transitioned through menopause and were included within the analyses. At menopause onset, Black women weighed more (77.8±3.0 vs. 70.8±1.8 kg), and had higher systolic (125±16 vs. 118±14 mmHg) and diastolic (80±8 vs. 74±7 mmHg) blood pressure compared to White women (all p≤0.05). No other differences in body composition, sex steroid hormones, or cardiometabolic risk factors were observed at menopause onset. Before menopause, White women gained significant weight (+3 kg), total body adiposity (+6% percent body fat, +9% fat mass, +12% trunk fat mass), and abdominal adipose tissue (+19% subcutaneous fat, +15% visceral fat, +19% total adipose tissue) which coincided with significant decreases in estradiol, sex hormone-binding globulin, and estrone sulfate, as well as increases in follicle-stimulating hormone, total cholesterol, and low-density lipoprotein cholesterol. Conversely, Black women had more abdominal adipose tissue before menopause, which was maintained across the menopause transition. Black women also had significant decreases in estrone sulfate and total testosterone, as well as increases in follicle-stimulating hormone before menopause. In the postmenopausal years, abdominal subcutaneous adipose tissue, total adipose tissue, follicle-stimulating hormone, total cholesterol, and low-density and high-density lipoprotein cholesterol increased only in White women. **CONCLUSIONS:** White women gained more abdominal adiposity during the menopause transition compared to Black women, which may be due in part to differences in the pattern of sex steroid hormone changes between women of different racial backgrounds. The gains in abdominal adiposity in White women were observed in tandem with increased cardiometabolic risk factors. Future studies should consider comprehensive lifestyle approaches to target these increased gains in abdominal adiposity (i.e., nutrition and physical activity coaching), while also taking into account the potential interactions of race, body adiposity, sex steroid hormones, and their influence on cardiometabolic risk.

**Scand J Med Sci Sports. 2019 Oct 11. doi: 10.1111/sms.13574. [Epub ahead of print]**

### **The effect of interval sprinting exercise on vascular function and aerobic fitness of postmenopausal women.**

Ho TY1, Redmayne GP1, Tran A1, Liu D1, Butlin M2, Avolio A2, Boutcher SH1, Boutcher YN1.

Menopausal transition accelerates an age-associated decrease in vascular function and a decline in aerobic fitness. The purpose of this study was to examine the effect of 8 weeks of interval sprinting cycle ergometer exercise on arterial stiffness, basal forearm blood flow, and aerobic fitness of postmenopausal women. Sixty overweight postmenopausal women were randomised into either exercise (Ex, n=30) or control (C, n=30) groups. Ex participants completed 24 interval sprinting exercise (ISE) sessions over 8 weeks. Each 20-minute ISE session comprised of alternating 8 seconds sprints and 12 seconds of light pedalling. Arterial stiffness, assessed through ankle-brachial

pulse wave velocity (baPWV) and augmentation index (AIx), basal forearm blood flow (FBF) assessed using venous occlusion, and aerobic fitness were assessed before and after the intervention. baPWV was significantly decreased in the Ex group by 7.2%,  $p=0.03$ , whereas AIx demonstrated a 10% decrease,  $p=0.002$ . No changes were found in basal FBF. Aerobic fitness was significantly increased,  $p=0.002$ , in the Ex group (14%) with no change occurring in the control group. ISE training, despite minimal exercise commitment time (8 hours over 8 weeks), significantly lowered the arterial stiffness and increased the aerobic fitness of postmenopausal women. These results suggest that ISE positively influences the negative change in arterial stiffness and aerobic fitness that typically accompanies menopause.

**Gynecol Endocrinol. 2019 Oct 11:1-6. doi: 10.1080/09513590.2019.1676409. [Epub ahead of print]**

### **Hormonal therapy in menopausal transition: implications for improvement of health-related quality of life.**

Dotlic J1,2, Nicevic S1, Kurtagic I1, Radovanovic S1, Rancic B1, Markovic N1, Milosevic B1, Gazibara T3. The study aim was to assess scores of the Menopause Rating Scale (MRS) among women who use and desire to use hormonal therapy (HT), as well as to evaluate factors contributing to HT use and desire to use HT among women in menopausal transition. A total of 513 mid-aged women participated in the study. Data were collected using socio-demographic questionnaire, MRS and Beck Depression Inventory. The prevalence of current HT use was 9.7%, while 4.5% of women who did not use HT expressed a desire to start using HT. The MRS cutoff score for HT use was 10.5 and 11.5 among those who desire to use HT. Living in the central city districts, having lower body mass index, younger age at menopause, more gynecological illnesses, and worse MRS were associated with HT use. Living in the central city districts, having fewer births, more gynecological and chronic illnesses and having more depressive symptoms were associated with the desire to use HT. Mid-aged women who perceive their quality of life as poor due to climacteric symptoms should be advised to consider HT to improve their health status and everyday functioning.

**Climacteric. 2019 Oct 7:1-8. doi: 10.1080/13697137.2019.1656186. [Epub ahead of print]**

### **Muscle health in Hispanic women. REDLINC VIII.**

Blümel JE1, Salinas C2, Danckers L3, Tserota K4, Ojeda E5, Vallejo MS6, Arteaga E7. Objectives: This study aimed to evaluate muscle strength and related factors in Hispanic women. Methods: We studied 593 women between 40 and 89 years old. The women were asked about personal and clinical information. The following instruments were applied: dynamometer (strength), Short Physical Performance Battery (physical performance), SARC-F (sarcopenia), International Physical Activity Questionnaire (physical activity), Menopause Rating Scale (quality of life), 36-item Short Form (general health), and Frailty (Fried's criteria). Results: Low muscle strength rises from 7.1% of women in their 40s to 79.4% in their 80s. Physical performance is low in 0.5% of the first group and rises to 60.5% in the second. The risk of sarcopenia increases significantly from 6.7% in younger women to 58.1% in older women. Frailty, which affects less than 1% of women under age 60 years, increases to 39.5% in their 80s. Sedentary lifestyle rises from 26% to 68.3%. Frailty impairs the quality of life and the perception of health ( $p < 0.0001$ ). The deterioration of different tests of muscle function is significantly associated with age  $>70$  years (OR 5-20) and with osteoarthritis (OR 4-9). Menopause before the age of 45 years increases the risk of sarcopenia (odds ratio 2.2; 95% confidence interval 1.2-4.0). Conclusion: With aging, there is a decrease in muscle strength and an increase in frailty. This entails a decrease in the quality of life.

**Lancet Public Health. 2019 Oct 3. pii: S2468-2667(19)30155-0. doi: 10.1016/S2468-2667(19)30155-0. [Epub ahead of print]**

### **Age at natural menopause and risk of incident cardiovascular disease: a pooled analysis of individual patient data.**

Zhu D1, Chung HF1, Dobson AJ1, Pandeya N2, Giles GG3, Bruinsma F4, Brunner EJ5, Kuh D6, Hardy R6, et al. BACKGROUND: Early menopause is linked to an increased risk of cardiovascular disease mortality; however, the association between early menopause and incidence and timing of cardiovascular disease is unclear. We aimed to assess the associations between age at natural menopause and incidence and timing of cardiovascular disease. METHODS: We harmonised and pooled individual-level data from 15 observational studies done across five

countries and regions (Australia, Scandinavia, the USA, Japan, and the UK) between 1946 and 2013. Women who had reported their menopause status, age at natural menopause (if postmenopausal), and cardiovascular disease status (including coronary heart disease and stroke) were included. We excluded women who had hysterectomy or oophorectomy and women who did not report their age at menopause. The primary endpoint of this study was the occurrence of first non-fatal cardiovascular disease, defined as a composite outcome of incident coronary heart disease (including heart attack and angina) or stroke (including ischaemic stroke or haemorrhagic stroke). We used Cox proportional hazards models to estimate multivariate hazard ratios (HRs) and 95% CIs for the associations between age at menopause and incident cardiovascular disease event. We also adjusted the model to account for smoking status, menopausal hormone therapy status, body-mass index, and education levels. Age at natural menopause was categorised as premenopausal or perimenopausal, younger than 40 years (premature menopause), 40-44 years (early menopause), 45-49 years (relatively early), 50-51 years (reference category), 52-54 years (relatively late), and 55 years or older (late menopause). FINDINGS: Overall, 301 438 women were included in our analysis. Of these 301 438 women, 12 962 (4·3%) had a first non-fatal cardiovascular disease event after menopause, of whom 9369 (3·1%) had coronary heart disease and 4338 (1·4%) had strokes. Compared with women who had menopause at age 50-51 years, the risk of cardiovascular disease was higher in women who had premature menopause (age <40 years; HR 1·55, 95% CI 1·38-1·73;  $p<0\cdot0001$ ), early menopause (age 40-44 years; 1·30, 1·22-1·39;  $p<0\cdot0001$ ), and relatively early menopause (age 45-49 years; 1·12, 1·07-1·18;  $p<0\cdot0001$ ), with a significantly reduced risk of cardiovascular disease following menopause after age 51 years ( $p<0\cdot0001$  for trend). The associations persisted in never smokers, and were strongest before age 60 years for women with premature menopause (HR 1·88, 1·62-2·20;  $p<0\cdot0001$ ) and early menopause (1·40, 1·27-1·54;  $p<0\cdot0001$ ), but were attenuated at age 60-69 years, with no significant association observed at age 70 years and older. INTERPRETATION: Compared with women who had menopause at age 50-51 years, women with premature and early menopause had a substantially increased risk of a non-fatal cardiovascular disease event before the age of 60 years, but not after age 70 years. Women with earlier menopause need close monitoring in clinical practice, and age at menopause might also be considered as an important factor in risk stratification of cardiovascular disease for women.