



Selección de Resúmenes de Menopausia

Semana del 26 de julio a 1 de agosto, 2023
María Soledad Vallejo. Hospital Clínico. Universidad de Chile

Int J Womens Health. 2023 Jul 24;15:1171-1183. doi: 10.2147/IJWH.S328441. eCollection 2023.

A Woman's Heart: Improving Uptake and Awareness of Cardiovascular Screening for Middle-Aged Populations

Brigitte Kazzi 1, Bairavi Shankar, Petal Elder-Odame, Lale S Tokgözoğlu, Lilia M Sierra-Galan, Erin D Micho.

Mid-life, the years leading up to and following the menopause transition, in women is accompanied by a change in cardiometabolic risk factors, including increases in body weight, changes in body composition, a more insulin-resistant state, and a shift towards a more atherogenic dyslipidemia pattern. Cardiovascular disease (CVD) risk assessment should be performed continually throughout the lifespan, as risk is not stagnant and can change throughout the life course. However, mid-life is a particularly important time for a woman to be evaluated for CVD risk so that appropriate preventive strategies can be implemented. Along with assessing traditional risk factors, ascertainment of a reproductive history is an integral part of a comprehensive CVD risk assessment to recognize unique female-specific or female-predominant factors that modify a woman's risk. When there is uncertainty about CVD risk and the net benefit of preventive pharmacotherapy interventions (such as statins), measuring a coronary artery calcium score can help further refine risk and guide shared decision-making. Additionally, there should be heightened sensitivity around identifying signs and symptoms of ischemic heart disease in women, as these may present differently than in men. Ischemia from coronary microvascular disease and/or vasospasm may be present even without obstructive coronary artery disease and is associated with a heightened risk for major cardiovascular events and reduced quality of life. Therefore, correctly identifying CVD in women and implementing preventive and treatment therapies is paramount. Unfortunately, women are underrepresented in cardiovascular clinical trials, and more data are needed about how to best incorporate novel and emerging risk factors into CVD risk assessment. This review outlines an approach to CVD screening and risk assessment in women using several methods, focusing on the middle-aged population.

Eur J Haematol. 2023 Jul 30. doi: 10.1111/ejh.14061. Online ahead of print.

Estrogen-based hormonal therapy and the risk of thrombosis in COVID-19 patients

Corinne LaVasseur 1, Rick Mathews 2, Jenny S H Wang 2, Kylee Martens 3, Hannah Stowe McMurry 3, et al.

Objective: Estrogen-containing contraceptives and hormone replacement therapy are used commonly, however, the risks of venous and arterial thrombosis imparted by such medications during COVID-19 infection or other similar viral infections remain undescribed. Methods: To assess the risk of venous and arterial thrombosis in patients receiving oral estrogen-containing therapy (ECT) with COVID-19 as compared to those receiving non-estrogen-based hormonal therapy, we conducted a multicenter cohort study of 991 patients with confirmed COVID-19 infection, 466 receiving estrogen-containing hormonal therapy, and 525 receiving progestin-only or topical therapy. Results: The use of estrogen-containing therapy was found to significantly increase the risk of venous thromboembolism (VTE) following COVID-19 diagnosis after controlling for age (HR 5.46 [95% CI 1.12-26.7, $p = .036$]). This risk was highest in patients over age 50, with 8.6% of patients receiving estrogen-containing therapy diagnosed with VTE compared to 0.9% of those receiving non-estrogen-based therapies ($p = .026$). The risk of arterial thrombosis was not significantly associated with oral estrogen use. Conclusions: These results suggest that estrogen-containing therapy is associated with a significantly increased risk of VTE in COVID-19 patients, especially in older individuals. These findings may guide provider counseling and management of patients with COVID-19 on estrogen-containing therapy.

BMC Med. 2023 Jul 27;21(1):278. doi: 10.1186/s12916-023-02993-6.

Risk of hip fracture in meat-eaters, pescatarians, and vegetarians: a prospective cohort study of 413,914 UK Biobank participants

James Webster 1, Darren C Greenwood 2, Janet E Cade 3

Background: Meat-free diets may be associated with a higher risk of hip fracture, but prospective evidence is limited. We aimed to investigate the risk of hip fracture in occasional meat-eaters, pescatarians, and vegetarians compared to regular

meat-eaters in the UK Biobank, and to explore the role of potential mediators of any observed risk differences. Methods: Middle-aged UK adults were classified as regular meat-eaters ($n = 258,765$), occasional meat-eaters ($n = 137,954$), pescatarians ($n = 9557$), or vegetarians ($n = 7638$) based on dietary and lifestyle information at recruitment (2006-2010). Incident hip fractures were identified by record linkage to Hospital Episode Statistics up to September 2021. Multivariable Cox regression models were used to estimate associations between each diet group and hip fracture risk, with regular meat-eaters as the reference group, over a median follow-up time of 12.5 years. Results: Among 413,914 women, 3503 hip fractures were observed. After adjustment for confounders, vegetarians (HR (95% CI): 1.50 (1.18, 1.91)) but not occasional meat-eaters (0.99 (0.93, 1.07)) or pescatarians (1.08 (0.86, 1.35)) had a greater risk of hip fracture than regular meat-eaters. This is equivalent to an adjusted absolute risk difference of 3.2 (1.2, 5.8) more hip fractures per 1000 people over 10 years in vegetarians. There was limited evidence of effect modification by BMI on hip fracture risk across diet groups (p interaction = 0.08), and no clear evidence of effect modification by age or sex (p interaction = 0.9 and 0.3, respectively). Mediation analyses suggest that BMI explained 28% of the observed risk difference between vegetarians and regular meat-eaters (95% CI: 1.1%, 69.8%). Discussion: Vegetarian men and women had a higher risk of hip fracture than regular meat-eaters, and this was partly explained by their lower BMI. Ensuring adequate nutrient intake and weight management are therefore particularly important in vegetarians in the context of hip fracture prevention.

Lipids Health Dis. 2023 Jul 26;22(1):107. doi: 10.1186/s12944-023-01818-y.

Oxidized dietary lipids induce vascular inflammation and atherogenesis in post-menopausal rats: estradiol and selected antihyperlipidemic drugs restore vascular health in vivo

Joy Temiloluwa Folahan, Olufunke Esan Olorundare, Abayomi Mayowa Ajayi, Adeoye Oyetunji Oyewopo, et al.

Background: Thermoxidation of edible oil through deep fat frying results in the generation of several oxidized products that promote lipid peroxidation and ROS production when eaten. Consumption of thermoxidized oil in post-menopausal conditions where the estrogen level is low contributes to cardiovascular disease. This study evaluates the role of estradiol and antihyperlipidemic agents (AHD) in restoring the vascular health of ovariectomized (OVX) rats fed with thermoxidized palm oil (TPO) and thermoxidized soya oil (TSO) diets. Method: A total of 10 groups of rats ($n = 6$) were set up for the experiment. Group I (normal control) rats were sham handled while other groups were OVX to bring about estrogen deficient post-menopausal state. Group II (OVX only) was not treated and received normal rat chow. Groups III-X were fed with either TPO or TSO diet for 12 weeks and treated with estradiol (ETD) 0.2 mg/kg/day, atorvastatin (ATV) 10 mg/kg/day, and a fixed-dose combination of ezetimibe and ATV (EZE 3 mg/kg/day + ATV 10 mg/kg/day). Results: Pro-atherogenic lipids levels were significantly elevated in untreated TSO and TPO groups compared to OVX and sham, resulting in increased atherogenic and Coronary-risk indices. Treatment with Estradiol and AHDs significantly reduced the total cholesterol, triglycerides, low-density lipoprotein cholesterol as well as AI and CRI compared to untreated TSO and TPO groups, whereas TSO and TPO groups showed significant elevation in these parameters compared to Group I values. Moreover, aortic TNF- α levels were extremely elevated in the untreated TSO and TPO compared to Group I. TNF- α levels were significantly reduced in rats treated with AHDs and ETD. Localized oxidative stress was indicated in the aortic tissues of TSO and TPO-fed OVX rats by increased malondialdehyde and decreased glutathione, catalase, and superoxide dismutase levels. This contributed to a depletion in aortic nitric oxide. AHDs and ETD replenished the nitric oxide levels significantly. Histological evaluation of the aorta of TSO and TPO rats revealed increased peri-adventitia fat, aortic medial hypertrophy, and aortic recanalization. These pathologic changes were less seen in AHDs and ETD rats. Conclusion: This study suggests that ETD and AHDs profoundly attenuate oxidized lipid-induced vascular inflammation and atherogenesis through oxidative-stress reduction and inhibition of TNF- α signaling.

Occup Med (Lond). 2023 Jul 26;kqad087. doi: 10.1093/occmed/kqad087. Online ahead of print.

Impact of menopausal symptoms on presenteeism in Japanese women

T Ishimaru 1, M Okawara 1, S Tateishi 2, T Yasui 3, S Horie 4, Y Fujino 1

Background: Menopausal symptoms are common among middle-aged women. Working women with severe menopausal symptoms are more likely to experience presenteeism—a condition where employees continue to work despite feeling unwell. However, it remains unclear as to which specific symptoms women experience during the menopausal transition and postmenopausal periods that primarily contribute to presenteeism. Aims: To evaluate the associations between types of menopausal symptoms and presenteeism among Japanese women. Methods: A cross-sectional study of 4000 women aged 40-59 years who were currently working was conducted in Japan in September 2022. We used an online self-administered questionnaire that included items on demographic characteristics, the Menopause Rating Scale for measuring

menopausal symptoms and the Work Functioning Impairment Scale for measuring presenteeism. Logistic regression analysis was performed. Results: Women with severe overall menopausal symptoms had 12.18-fold (95% confidence interval [CI] 9.09-16.33, $P < 0.001$) increased odds of presenteeism compared with those without symptoms. Participants with psychological symptoms also had significantly higher presenteeism (severe: odds ratio: 9.18, 95% CI 6.60-12.78, $P < 0.001$). However, after controlling for psychological symptoms, there were no significant associations between somatic and urogenital symptoms and presenteeism. Conclusions: The results indicate that menopausal symptoms, especially psychological symptoms, have a significant impact on presenteeism among Japanese women. Organizations need to address menopausal symptoms in the workplace, with an emphasis on reducing work-related stress for women with menopausal symptoms.

Circ Res. 2023 Jul 25. doi: 10.1161/CIRCRESAHA.123.322984. Online ahead of print.

Age at Menopause, Leukocyte Telomere Length, and Coronary Artery Disease in Postmenopausal Women

Art Schuermans 1 2 3, Tetsushi Nakao 1 2 4 5, Md Mesbah Uddin 1 2, Whitney Hornsby 1 2, Shriie Ganesh, et al.

Background: Premature menopause is a risk factor for accelerated cardiovascular aging, but underlying mechanisms remain incompletely understood. This study investigated the role of leukocyte telomere length (LTL), a marker of cellular aging and genomic instability, in the association of premature menopause with cardiovascular disease. **Methods:** Participants from the UK Biobank and Women's Health Initiative with complete reproductive history and LTL measurements were included. Primary analyses tested the association between age at menopause and LTL using multivariable-adjusted linear regression. Secondary analyses stratified women by history of gynecologic surgery. Mendelian randomization was used to infer causal relationships between LTL and age at natural menopause. Multivariable-adjusted Cox regression and mediation analyses tested the joint associations of premature menopause and LTL with incident coronary artery disease. **Results:** This study included 130 254 postmenopausal women (UK Biobank: $n=122\ 224$; Women's Health Initiative: $n=8030$), of whom 4809 (3.7%) had experienced menopause before age 40. Earlier menopause was associated with shorter LTL (meta-analyzed $\beta=-0.02$ SD/5 years of earlier menopause [95% CI, -0.02 to -0.01]; $P=7.2 \times 10^{-12}$). This association was stronger and significant in both cohorts for women with natural/spontaneous menopause (meta-analyzed $\beta=-0.04$ SD/5 years of earlier menopause [95% CI, -0.04 to -0.03]; $P<2.2 \times 10^{-16}$) and was independent of hormone therapy use. Mendelian randomization supported a causal association of shorter genetically predicted LTL with earlier age at natural menopause. LTL and age at menopause were independently associated with incident coronary artery disease, and mediation analyses indicated small but significant mediation effects of LTL in the association of menopausal age with coronary artery disease. **Conclusions:** Earlier age at menopause is associated with shorter LTL, especially among women with natural menopause. Accelerated telomere shortening may contribute to the heightened cardiovascular risk associated with premature menopause.

Meta-Analysis Front Endocrinol (Lausanne). 2023 Jul 6;14:1165574. doi: 10.3389/fendo.2023.1165574.

Mesenchymal stem cells therapy improves ovarian function in premature ovarian failure: a systematic review and meta-analysis based on preclinical studies

Congcong Guo 1, Yubo Ma 2, Yanqiu Situ 1, Li Liu 3, Guoqun Luo 1, Huan Li 1, Wenmin Ma 4, Li Sun 5, et al.

Background: Studies have revealed that the transplantation of mesenchymal stem cells (MSCs) might be a potential star candidate for premature ovarian failure (POF) in animal experiments. However, individual studies with a small sample size cannot be used to draw a clear conclusion. Therefore, we conducted a systematic review and meta-analysis to explore the potential of using MSCs in the treatment of POF in animals. **Methods:** Seven databases were searched for studies exploring the effect of the transplantation of MSCs on POF in animal models. The PRISMA guideline was followed, and the methodological quality was ensured using SYRCL's risk of bias tool. RevMan 5.4 and STATA 12.0 software was performed to meta-analysis. **Results:** In total, 37 studies involving 1,079 animals were included. Significant associations were found for MSCs with the levels of E2 (SMD 2.69 [95% CI 1.97, 3.41]), FSH (-2.02, [-2.74, -1.30]), primary follicles (2.04, [1.17, 2.92]), secondary follicles (1.93, [1.05, 2.81]), and primordial follicles (2.38, [1.19, 3.57]). Other outcomes, such as AMH, LH, INHB, antral follicles, growing follicles, mature follicles, and early antral were also found to be significant. There was no difference in FSH/LH, corpus luteum, follicles, and estrus cycle. **Conclusions:** Our meta-analysis result indicated that the transplantation of MSCs might exert therapeutic effects on animal models of POF, and these effects might be associated with improving the disorder of the sexual cycle, modulating serum hormone expressions to a better state, and restoring ovarian function.