

## Cardiovascular disease in women: take it to heart

Cynthia A. Stuenkel (GUEST EDITOR)

To cite this article: Cynthia A. Stuenkel (GUEST EDITOR) (2024) Cardiovascular disease in women: take it to heart, *Climacteric*, 27:1, 2-4, DOI: [10.1080/13697137.2023.2286140](https://doi.org/10.1080/13697137.2023.2286140)

To link to this article: <https://doi.org/10.1080/13697137.2023.2286140>



Published online: 15 Jan 2024.



Submit your article to this journal [↗](#)



Article views: 156



View related articles [↗](#)



View Crossmark data [↗](#)

---



EDITORIAL

## Cardiovascular disease in women: take it to heart

Cynthia A. Stuenkel

GUEST EDITOR

Department of Medicine, Division of Endocrinology and Metabolism, UC San Diego School of Medicine, La Jolla, CA, USA

Cardiovascular disease (CVD) is the number 1 killer of women and, according to the World Heart Federation, is responsible for one in three deaths globally [1]. Over the past decade, the prevalence of CVD risk factors and CVD events has increased in women – and increasingly in younger women – more than ever before. The alarm has been sounded by experts throughout the world that urgent attention is needed to inform women and practitioners about this evolving development so that appropriate identification of those at risk and initiation of preventive strategies will be prioritized [2, 3].

The International Menopause Society (IMS) leadership determined that the topic of Cardiovascular Disease in Women merited the full emphasis of the Society as afforded by World Menopause Day, celebrated on October 18, 2023, and also designated this subject as the focus of a special issue of *Climacteric*. Although the IMS White Paper, released on World Menopause Day, touched on many aspects of CVD in women, because of compelling, emerging evidence that the cardiovascular health of women at midlife and beyond reflects reproductive events over their lifespan, it emphasized cardiovascular risks associated with reproductive milestones [4]. In this issue of *Climacteric*, additional topics specific to CVD in women are introduced, and some of those highlighted in the White Paper have been expanded.

The differences in presentation, management, strength of supporting evidence for treatments, and CVD outcomes in women versus men constitute one of the most important concerns. In ‘Closing the gap’, Nathani, along with key architects of the *Lancet* Commission on reducing the global burden of CVD in women by 2030 [2], provides a compelling overview of these challenges and suggests remedies going forward [5]. Furthermore, it has become clear that certain manifestations of CVD occur predominantly in women. In ‘Ischemia but no obstructive coronary artery disease: more than meets the eye’, Patel et al. detail clinical aspects, pathophysiology and management of syndromes in women who do not have evidence of coronary artery obstruction – ischemia with non-obstructive coronary arteries (INOCA) and myocardial infarction with non-obstructive coronary arteries (MINOCA) – both associated with increased clinical events and poor outcomes [6]. Congestive heart failure with

preserved ejection fraction (HFpEF) also presents more commonly in women. In ‘A disease of her own? Unique features of heart failure in women’, Spacht and Lau review the clinical aspects of congestive heart failure and clarify the presentation, evaluation and therapy of HFpEF in women [7].

As indicated in the White Paper, a number of reproductive milestones increase CVD risk – menstrual cycle irregularities, infertility, adverse pregnancy outcomes, polycystic ovary syndrome, breast cancer therapies, autoimmune disorders, and early or premature menopause [4]. Given the clinical prevalence of these conditions, additional contributors were invited to elaborate on several of these topics. In the first, ‘Pregnancy-associated risk factors for future cardiovascular disease – early prevention strategies warranted’, Mikkola and Ylikorkala expand on hypertensive disorders of pregnancy, gestational diabetes, adverse pregnancy outcomes, and a prescription for follow-up after delivery, including a proactive approach to achieving healthy subsequent pregnancies [8]. A second common clinical entity is addressed in ‘Polycystic ovary syndrome: associations with cardiovascular disease’ by Benham et al., who review the latest designation of polycystic ovary syndrome as a CVD risk factor [9]. Related, but distinct, is a discussion on ‘Testosterone and the heart, friend or foe?’ by Davis [10]. This piece reviews the physiology of testosterone as related to cardiovascular health, available clinical data related to endogenous and exogenous effects of testosterone in women, and a research agenda including cardiovascular endpoint trials with testosterone administration. Finally, the complexities of breast cancer therapies on CVD health and disease are outlined by Ray et al. in ‘Women’s cardiovascular health – the cardio-oncologic jigsaw’ [11].

The next section focuses on menopause. Lambrinoudaki and Armeni lead a discussion, ‘Understanding cardiometabolic transition at the menopause’, that outlines the physiological changes contributing to accelerated CVD risk during the perimenopause, and addresses preventive strategies including considerations of the role of hormone therapy [12]. Thurston follows with ‘Vasomotor symptoms and cardiovascular health: findings from the SWAN and the MsHeart/MsBrain Studies’, an update regarding the role of the most common symptom of menopause, hot flashes or vasomotor symptoms, on

cardiovascular risk [13]. The topic of hormone therapy is then examined from several perspectives. In the first, Nudy et al. present ‘Menopausal hormone therapy and cardiovascular disease – the roller coaster history’, in which they review pivotal clinical trials of hormone therapy and cardiovascular disease with an eye on the timing hypothesis [14]. Next, in ‘Cardiovascular risk assessment in women: which women are suited for menopausal hormone therapy?’, Maas addresses the nuts and bolts of prescribing hormone therapy including a step-by-step approach [15]. The last piece, ‘Use of MHT in women with cardiovascular disease: a systematic review and meta-analysis’, by Bontempo et al., is required reading for anyone caring for women transitioning through or beyond menopause, as we anticipate the wave of increased prevalence of cardiovascular risk and the rising history of early CVD events [16].

The final section includes a stand-alone piece by Gray et al., ‘Primary prevention of cardiovascular disease in women’ [17]. This applies to every reader of *Climacteric* and every patient that you may see, regardless of her age or menopausal status. It’s never too early or too late to initiate a conversation regarding cardiovascular health, risk assessment, and preventive strategies.

If we are to meet the goal of reducing the global burden of CVD by 2030, as challenged by the The *Lancet* Commission [2], we need to work to increase awareness of CVD in women, keep preventive strategies at the forefront of clinical care, educate our colleagues and trainees about the urgency of this topic, and positively influence the health priorities of our institutions. In collaboration with the World Heart Federation, the first international Go Red for Women license was granted in 2006; 17 years later, Go Red is now licensed by 55 organizations in 51 countries across the globe [18]. As February is designated Heart Month internationally, perhaps the content of this special issue will inspire you to take up this challenge.

It has been my honor and my privilege to serve as Guest Editor for this special edition of *Climacteric* focused on Cardiovascular disease in women. The authors of this compendium include a spectrum of internationally renowned leaders in this constellation as well as relatively new stars in the firmament. Selecting topics and inviting contributors, recruiting reviewers, responding to authors, and then working to reach publication targets required a collaborative effort. This included the Editor-in-Chief of *Climacteric*, Professor Rod Baber, the many expert authors who shared their knowledge and clinical perspectives, the reviewers who contributed their time and expertise, and, finally, the able and committed administrators including Jean Wright, IMS Editorial Consultant, and Susan Brown, *Climacteric* Editorial Assistant, who ushered the entire process from conception to delivery. I am grateful to all who worked to make this possible. I hope that you, the reader of *Climacteric*, will find that this issue increases your awareness and understanding of the breadth and depth of the clinical manifestations of CVD in women, and that, at the end of the day, it enhances your confidence and competence in recommending preventive measures, identifying symptoms, managing risks and, if indicated, making appropriate referrals for diagnostic and

therapeutic interventions to enhance the cardiovascular health of your patients.

**Potential conflict of interest** The author reports serving on the Data and Safety Monitoring Board for ICON Clinical Research on behalf of Mithra Pharmaceuticals. The author alone is responsible for the content and writing of the paper.

**Source of funding** None.

## References

- [1] World Heart Federation. Women & CVD. Available at <https://world-heart-federation.org/what-we-do/women-cvd/>; accessed 6/24/23.
- [2] Vogel B, Acevedo M, Appelman Y, et al. The *Lancet* women and cardiovascular disease Commission: reducing the global burden by 2030. *Lancet*. 2021 Jun 19;397(10292):2385–2438. Epub 2021 May 16. PMID: 34010613. doi: [10.1016/S0140-6736\(21\)00684-X](https://doi.org/10.1016/S0140-6736(21)00684-X).
- [3] Wenger NK, Lloyd-Jones DM, Elkind MSV, et al. American Heart Association. Call to Action for Cardiovascular Disease in Women: Epidemiology, Awareness, Access, and Delivery of Equitable Health Care: A Presidential Advisory From the American Heart Association. *Circulation*. 2022 Jun 7;145(23):e1059–e1071. doi: [10.1161/CIR.0000000000001071](https://doi.org/10.1161/CIR.0000000000001071).
- [4] Stuenkel CA. Reproductive milestones across the lifespan and cardiovascular disease risk in women. *Climacteric*. 2023 Sep 28:1–11. Epub ahead of print. PMID: 37769699. doi: [10.1080/13697137.2023.2259793](https://doi.org/10.1080/13697137.2023.2259793).
- [5] Nathani M, Vogel B, Mehran R. Closing the gap: cardiovascular disease in women. *Climacteric*. 2023. Epub ahead of print. doi: [10.1080/13697137.2023.2281935](https://doi.org/10.1080/13697137.2023.2281935).
- [6] Patel N, Greene N, Guynn N, et al. Ischemia but no obstructive coronary artery disease: more than meets the eye. *Climacteric*. 2023. Epub ahead of print. doi: [10.1080/13697137.2023.2281933](https://doi.org/10.1080/13697137.2023.2281933).
- [7] Spacht WA, Lau ES. A disease of her own? Unique features of heart failure in women. *Climacteric*. 2023 Sep 28:1–9. Epub ahead of print. PMID: 37768321. doi: [10.1080/13697137.2023.2256673](https://doi.org/10.1080/13697137.2023.2256673).
- [8] Mikkola TS, Ylikorkala O. Pregnancy-associated risk factors for future cardiovascular disease – early prevention strategies warranted. *Climacteric*. 2023. Epub ahead of print. doi: [10.1080/13697137.2023.2287628](https://doi.org/10.1080/13697137.2023.2287628).
- [9] Benham JL, Goldberg A, Teede H, Tay CT. Polycystic ovary syndrome: associations with cardiovascular risk. *Climacteric*. 2023. Epub ahead of print. doi: [10.1080/13697137.2023.2282689](https://doi.org/10.1080/13697137.2023.2282689).
- [10] Davis SR. Testosterone and the heart: friend or foe? *Climacteric*. 2023 Sep 4:1–7. Epub ahead of print. PMID: 37666273. doi: [10.1080/13697137.2023.2250252](https://doi.org/10.1080/13697137.2023.2250252).
- [11] Ray M, Butel-Simoes LE, Lombard JM, et al. Women’s cardiovascular health – the cardio-oncologic jigsaw. *Climacteric*. 2023. Epub ahead of print. doi: [10.1080/13697137.2023.2286382](https://doi.org/10.1080/13697137.2023.2286382).
- [12] Lambrinoukaki I, Armeni E. Understanding of and clinical approach to cardiometabolic transition at the menopause. *Climacteric*. 2023 May 24:1–7. Epub ahead of print. PMID: 37224871. doi: [10.1080/13697137.2023.2202809](https://doi.org/10.1080/13697137.2023.2202809).
- [13] Thurston RC. Vasomotor symptoms and cardiovascular health: findings from the SWAN and the MsHeart/MsBrain studies. *Climacteric*. 2023 Aug 14:1–6. Epub ahead of print. PMID: 37577812. doi: [10.1080/13697137.2023.2196001](https://doi.org/10.1080/13697137.2023.2196001).
- [14] Nudy M, Buerger J, Dreifelbis S, et al. Menopausal hormone therapy and coronary heart disease: the roller coaster history. *Climacteric*. 2023. Epub ahead of print. doi: [10.1080/13697137.2023.2282690](https://doi.org/10.1080/13697137.2023.2282690).
- [15] Maas AHEM. Cardiovascular risk assessment in women: which women are suited for menopausal hormone therapy? *Climacteric*. 2023

Nov 6:1–4. Epub ahead of print. PMID: 37931647. doi: [10.1080/13697137.2023.2259799](https://doi.org/10.1080/13697137.2023.2259799).

- [16] Bontempo S, Yeganeh L, Giri R, Vincent AJ. Use of MHT in women with cardiovascular disease: a systematic review and meta-analysis. *Climacteric*. 2023 Nov 7:1–11. Epub ahead of print. PMID: 37933495. doi: [10.1080/13697137.2023.2273524](https://doi.org/10.1080/13697137.2023.2273524).
- [17] Gray MP, Vogel B, Mehran R, et al. Primary prevention of cardiovascular disease in women. *Climacteric*. 2023. Epub ahead of print. doi: [10.1080/13697137.2023.2282685](https://doi.org/10.1080/13697137.2023.2282685).
- [18] International Go Red for Women. Available at: <https://www.goredforwomen.org/en/about-go-red-for-women/international>; ©2023 American Heart Association; Accessed 6 Nov 2023.