VA WOMEN'S HEALTH RESEARCH NETWORK
Supporting Practice and Research Collaboration

U.S. Department of Veterans Affairs
Veterans Health Administration
Health Systems Research

Cardiovascular Disease in Women Veterans:
Reducing Sex Differences in Risk and Prevention

Cardiovascular disease (CVD) refers to conditions that affect the heart and blood vessels, such as coronary artery disease, heart failure, heart attacks and stroke. CVD is the leading cause of death for women in the United States.[1] Women Veterans have higher rates of CVD and CVD-related mortality than non-Veteran women. Additionally, women Veterans have unique CVD risk factors and are less likely to receive CVD preventive care (e.g., statin medications) than men Veterans. Research has made progress in understanding CVD and its risk factors among women Veterans, with most studies focusing on women Veterans who use Veterans Affairs (VA) healthcare (28% of women Veterans). More work is needed to identify interventions for reducing sex differences in CVD risk and prevention.

Key Findings

Cardiovascular disease (CVD) and its traditional risk factors are common among women Veterans

- Among women Veterans who use VA healthcare, approximately 1 in 3 aged 65+ years and 1 in 10 overall have a diagnosed CVD condition[2]
- Approximately 1 in 4 pregnant women Veterans has a pregnancy-related CVD condition (e.g., pre-eclampsia), with elevated rates among Black compared to White women Veterans[3]
- Women Veterans have higher rates of CVD[4] and a 26% higher CVD-related mortality rate compared to non-Veteran women[5]
- Women Veterans have high rates of traditional CVD risk factors such as high blood pressure, obesity, diabetes, elevated low-density lipoprotein (LDL) cholesterol, and smoking[2,4]

Women Veterans have high rates of "non-traditional" CVD risk factors

- Women Veterans are more likely to have "non-traditional" CVD risk factors related to psychological distress and disorders compared to men Veterans and non-Veteran women[4,6]
- Women Veterans with depression have 60% higher odds of heart disease compared to those without depression[7]
- Women Veterans with posttraumatic stress disorder (PTSD) have a 44% higher rate of developing heart disease[6] and a 33% higher rate of developing stroke or transient ischemic attack compared to those without PTSD[8]

Women Veterans are less likely than men Veterans to receive preventive treatment for CVD

- Women Veterans with CVD are less likely than men Veterans to receive medications (e.g., antiplatelet agents, statins) recommended by current treatment guidelines[9-11]
- Women Veterans may be less adherent to CVD medications compared to men Veterans (due to barriers such as those described in the next section)[9]
- Women Veterans are more likely than men Veterans to report that their healthcare providers do not perceive them to be at risk for CVD or explain CVD preventive behaviors (e.g., diet, exercise)[12]

Multilevel barriers contribute to sex differences in CVD prevention

- Women Veterans experience a greater number of barriers to CVD prevention compared to men Veterans[12]
- Individual barriers to engaging in CVD preventive behaviors include women Veterans': perceptions that they are not at risk for CVD; difficulty prioritizing themselves; lack of confidence in their ability to make lifestyle changes; limited social support; and mental health conditions[11-13]
- VA healthcare provider barriers to addressing CVD risk among women Veterans include limited time during appointments and challenges related to coordinating with staff and services that address CVD risk[13]

Ongoing work focuses on identifying and reducing CVD risk among women Veterans

- A new CVD risk assessment tool showed improvement over previous tools in predicting CVD risk among White and Hispanic (though not Black) women Veterans[14]
- A mindfulness-based stress reduction program improved well-being and reduced cortisol (which is associated with CVD risk) among women Veterans with CVD risk factors[15]
- Repeated screening for tobacco use in primary care increased the likelihood that women Veteran smokers received prescriptions or referrals for smoking cessation treatment[16]
- More research is needed to develop effective interventions for preventing and treating CVD in women Veterans[4]

Funded VA Women's Cardiovascular Disease Research Projects

Enhancing Mental and Physical Health of Women through Engagement and Retention (EMPOWER) QUERI 2.0. (Bevanne Bean-Mayberry, MD, MPH; QUERI-funded Oct 2021- Sep 2026). This project evaluates implementation of evidence-based practices, including one focused on preventing CVD (Telephone Lifestyle Coaching). Goals include engaging women Veterans in the program and identifying effective strategies for implementation at VA facilities. *For more information:* Bevanne.Bean-Mayberry@va.gov

Team-Supported, Electronic Health Record (EHR)-leveraged, Active Management for Women Veterans (TEAM-WV). (Karen Goldstein, MD, MSPH, Hayden Bosworth, PhD; Office of Rural Health-funded 2021-2024). This multi-site project tailored an existing evidence-based program that addresses high blood pressure to the CVD risk profile and needs of women Veterans. *For more information:* Karen.Goldstein@va.gov

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For More Information:

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