

Review Article

Integrative insights on cardiovascular health: A comparative review of traditional Persian medicine and contemporary cardiological approaches

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Abstract

Objective: This narrative review examines the intersections between Traditional Persian Medicine (TPM) and modern cardiology in the understanding, prevention, and treatment of cardiovascular diseases (CVDs).

Materials and methods: Literature was sourced from PubMed, Scopus, and Google Scholar for the period from January 2015 to August 2025, supplemented with classical TPM texts beyond this date range. Priority was given to original clinical trials, cohort studies, and experimental investigations whenever primary evidence was available.

Results: The reviewed literature identified potential cardiovascular benefits of selected medicinal plants, including garlic, saffron, pomegranate, cinnamon, and hawthorn, through antihypertensive, antioxidant, anti-inflammatory, endothelial-protective, and cardiometabolic effects. Lifestyle and dietary interventions also showed conceptual alignment between TPM and contemporary cardiovascular prevention. However, evidence for TPM-specific concepts, including *hararat*, *mizaj*, and pulse-based diagnosis, remains predominantly conceptual or exploratory, with limited clinical validation. Major gaps include non-standardized diagnostic criteria, variability in herbal preparations and dosages, limited herb–drug interaction data, heterogeneous clinical studies, and insufficient multicenter randomized trials.

Conclusion: Evidence from regenerative medicine, psycho-cardiology, and AI-assisted tools is incorporated to propose a multidisciplinary model bridging ancient wisdom and modern science. The findings suggest that TPM may provide complementary preventive and personalized cardiovascular strategies; however, substantial heterogeneity and limited clinical standardization remain important barriers to evidence-based implementation, and further large-scale clinical trials, mechanistic investigations, and standardized herbal protocols are required before broad clinical implementation.

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The integration of Traditional Persian Medicine concepts—including *hararat*, humoral balance, and temperament-based guidance—with modern cardiology offers a promising path for holistic cardiovascular strategies. Evidence from both historical texts and contemporary studies supports the cardioprotective potential of TPM interventions, such as medicinal plants (garlic, saffron, pomegranate, hawthorn) and lifestyle modifications (stress reduction, tailored exercise, diet). Modern technologies like AI-powered tools, regenerative medicine, and genetic profiling provide synergistic opportunities to refine and personalize these approaches. While TPM and conventional medicine have different philosophical foundations, they share an emphasis on prevention and individualized care. Future research should prioritize rigorous clinical trials, standardized herbal preparations, and integrative models to fully realize the potential of combining TPM wisdom with modern science for improving patient outcomes. Overall, this review suggests that TPM may provide valuable complementary perspectives for preventive, personalized, and lifestyle-oriented cardiovascular medicine. Nevertheless, integration into evidence-based clinical practice requires robust mechanistic studies, standardized diagnostic criteria, careful evaluation of herb–drug interactions, and multicenter randomized clinical trials assessing long-term cardiovascular outcomes.

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Conflicts of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Abbreviations

ACE: Angiotensin-converting enzyme
 AI: Artificial intelligence
 BP: Blood pressure
 CBT: Cognitive behavioral therapy
 COPD: Chronic obstructive pulmonary disease
 CVD: Cardiovascular disease
 ECG: Electrocardiogram
 eNOS: Endothelial nitric oxide synthase
 HF: Heart failure
 HPA: Hypothalamic-pituitary-adrenal
 IHD: Ischemic heart disease
 LDL-C: Low-density lipoprotein cholesterol
 MBSR: Mindfulness-based stress reduction
 RAAS: Renin-angiotensin-aldosterone system
 TPM: Traditional Persian Medicine
 WHO: World Health Organization