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**THE CARDIOVASCULAR SYSTEM PLAYS A VITAL ROLE IN
MAINTAINING HOMEOSTASIS BY TRANSPORTING OXYGEN,
NUTRIENTS, HORMONES, AND WASTE PRODUCTS THROUGHOUT
THE BODY, ENSURING THE PROPER FUNCTIONING OF ALL
ORGANS AND TISSUES**

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The cardiovascular system plays a vital role in maintaining homeostasis by transporting oxygen, nutrients, hormones, and waste products throughout the body, ensuring the proper functioning of all organs and tissues.

Annotation:

The cardiovascular system is essential for sustaining life and maintaining homeostasis in the human body. It functions through the coordinated work of the heart, blood, and blood vessels, delivering oxygen and nutrients while removing carbon dioxide and metabolic wastes. This paper explores the structure and function of the cardiovascular system and its critical role in regulating body temperature, pH balance, and overall cellular health. Understanding the system's mechanisms is key to identifying, preventing, and managing cardiovascular diseases, which remain a leading cause of global mortality.

Keywords : Cardiovascular system, homeostasis, blood circulation, heart, oxygen transport, nutrients, waste removal

Material and Methods :

This study is based on a descriptive and analytical review of current scientific literature related to the human cardiovascular system. Textbooks of human physiology, peer-reviewed medical journals, and credible online medical sources



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were examined to understand the structure, functions, and importance of the cardiovascular system. Comparative analysis was also conducted on normal and diseased cardiovascular functions using existing case studies and research data.

Conclusion

The cardiovascular system is fundamental for maintaining the internal balance of the human body. By delivering essential substances like oxygen and nutrients and removing waste products, it supports the health and function of all tissues. Any dysfunction in this system can lead to serious health complications, emphasizing the need for further education, preventive healthcare, and research. A healthy cardiovascular system is a cornerstone of overall human well-being.

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