



Invited Editorial

Cardiometabolic health: The overlooked epidemic and pathways for prevention

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Cardiometabolic health is an increasingly pivotal concept in the realm of public health, encapsulating the interplay between cardiovascular diseases (CVD) and metabolic disorders like obesity, diabetes, and dyslipidemia. As global rates of chronic diseases continue to rise, understanding and addressing cardiometabolic health has never been more urgent. This editorial aims to explore the significance of cardiometabolic health, its impact on populations worldwide, and the crucial steps needed to mitigate the associated risks.

THE GROWING BURDEN

Cardiometabolic diseases represent a convergence of multiple risk factors that significantly contribute to morbidity and mortality worldwide. According to the World Health Organization (WHO), cardiovascular diseases are the leading cause of death globally, and their co-occurrence with metabolic disorders such as type 2 diabetes further compounds their impact.¹ In fact, individuals with diabetes or metabolic syndrome are two to three times more likely to develop heart disease than those without these conditions. The association between the heart and metabolic health is undeniable, and it is clear that addressing these conditions together is essential for improving overall health outcomes.

This global burden is exacerbated by rapid urbanization, changing diets, sedentary lifestyles, and increasing prevalence of obesity, which directly influence the risk factors associated with cardiometabolic health. The rise in conditions like hypertension, dyslipidemia, and insulin resistance are signals of broader shifts in health patterns, pointing to a need for comprehensive strategies that target prevention and early intervention.²

RISK FACTORS AND MECHANISMS

The underlying risk factors of cardiometabolic diseases are multifactorial, often involving genetics, lifestyle choices, and environmental influences. Unhealthy diets, physical inactivity, and stress are major contributors to the development of these conditions. The metabolic processes involved in these diseases are highly interconnected, with poor glucose metabolism, dysregulated lipid profiles, and chronic inflammation playing key roles in their progression.

Central to understanding cardiometabolic health is recognizing how these diseases often coexist and interact in ways that amplify risk. For example, visceral obesity—a condition where fat accumulates around the internal organs—disrupts normal metabolic functions, increasing the risk of both diabetes and cardiovascular events. Moreover, insulin resistance, which often precedes the development of type 2 diabetes, is an established risk factor for atherosclerosis and

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other cardiovascular complications. Thus, tackling these risk factors in isolation is insufficient. A more integrated approach accounting for the interconnected nature of metabolic and cardiovascular health is needed.

THE ROLE OF PREVENTION AND EARLY INTERVENTION

Effective management of cardiometabolic health hinges on early detection and prevention. The rising tide of these conditions underscores the importance of public health initiatives that focus on education, behavioral change, and timely medical intervention. Lifestyle modifications, including improved dietary habits, increased physical activity, and weight management, are the cornerstone of prevention strategies.

Additionally, the role of healthcare providers in identifying individuals at risk early through routine screenings and biomarkers cannot be overstated. Assessing risk factors like blood pressure, cholesterol levels, and blood sugar is critical for preventing disease progression and mitigating long-term complications.

However, the current healthcare landscape often falls short of addressing cardiometabolic health comprehensively. Access to preventive care and health education remains a barrier in many underserved populations, further exacerbating health disparities. It is essential for policymakers to prioritize access to affordable, high-quality care and invest in community-based interventions that focus on lifestyle changes.

THE NEED FOR A HOLISTIC APPROACH

A comprehensive approach to improving cardiometabolic health requires collaboration across various sectors, including

healthcare, policy, education, and government. Public health campaigns that emphasize the importance of nutrition, physical activity, and stress management should be integral to national health strategies.

Innovative research into the genetic and epigenetic underpinnings of these conditions will also be vital in designing more personalized treatments and preventative measures. Advances in precision medicine could hold the key to better-targeted therapies that not only treat symptoms but also address the root causes of these diseases.

CONCLUSION

Cardiometabolic health is a critical area of focus for global public health in the 21st century. With the interconnectedness of heart disease, diabetes, and metabolic disorders, a multifaceted approach to prevention, early detection, and treatment is necessary to alleviate the burden of these conditions.

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