

14. IMPACT OF CLIMATE CHANGE ON CARDIOVASCULAR OUTCOMES



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Introduction Cardiovascular disease (CVD) remains a leading cause of global morbidity and mortality, through an interplay between climate change and the prevalence, progression, and prevention of CVD. In late years, a growing number of research articles have explored the various dimensions of this kinship, shedding light on the temperature-related effects over which climate change impacts cardiovascular health.

Aim of study. The aim of this study is to research the impact of rising temperatures on CVD, exploring the specific mechanisms through which heat stress and prolonged heat waves contribute to increased risks and occurrences of cardiovascular events. By elucidating the thermal influences on CVD, this review aims to inform the state of affairs and the alert for doctors who fight with established cardiovascular diseases, but also for their prevention.

Methods and materials. The results include in detail selecting and inspecting a collection of the newer sources from electronic databases as PubMed, NCBI, HINARI and AHA/ASA Journals.

Results. Our study notes compelling evidence that a 1°C increase in temperature increases the rate of cardiovascular events and increases CVD mortality by 4.15%. Analysis of these studies also demonstrated a correlation between each 1°C increase in temperature with the frequency of hospital admissions related to cardiovascular damage. It highlights the alarming impact of climate change, marked by the increase in global average temperature over the past decade, on CVD. The increase in extreme heat events, exemplified by the 2003 Central European heat wave that caused more than 70,000 deaths, highlights the immediate consequences of high temperatures. At the same time, there is an increased risk of myocardial infarction (MI) observed at temperatures >18°C, affecting especially people with type 2 diabetes or hypertension. In addition, the study emphasizes the effects of sweating, increased pulse, vasodilatation, impaired coagulation are just some of the consequences that lead to increased blood pressure, increased systemic inflammation and the risk of cardiovascular events.

Conclusion. Need for action on awareness of climate change, global warming and its effects on cardiovascular health. Concrete instructions for doctors, patients and their relatives through the educational method "train to train" for the management of patients with established cardiovascular diseases and/or for their prevention.