



# Effect of Climate Change on Cardiovascular and Respiratory Diseases in Iran: A Systematic Review Study

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## ABSTRACT

**Introduction:** Human activities such as the combustion of fossil fuels, deforestation, and industrial activities result in global warming. The impact of climate change significantly hinders the attainment of Sustainable Development Goals (SDGs), particularly in low and middle-income countries. Climate change is intense in Middle Eastern countries, especially Iran. On the other hand, the relationship between climate change and health results is varied and intricate, involving various pathways of exposure that could contribute to the onset of non-communicable ailments like respiratory and cardiovascular diseases. In this study, we aim to provide an overview of the effects of climate change on respiratory and cardiovascular diseases in Iran.

**Search Strategy:** The present systematic review was performed based on the PRISMA guidelines. A comprehensive literature search was conducted with a publication year limitation between January 2005 and April 2024 within the scientific databases, including PubMed, Web of Science, Science Direct, Scopus, and Google Scholar. Internal databases such as SID, ISC, Magiran, Irandoc, and Civilica were also searched. The keywords "climate change," "cardiovascular," "respiratory," "climate change," and "Iran" were used in combination with the operators "OR" and "AND." Following a thorough screening, a total of 587 articles were found. Of these, 12 articles were finally selected that met the required criteria for the study's objective.

**Results:** Results showed that climate change's consequences have direct and indirect effects on patients and enhance the risk of cardiovascular and respiratory diseases. Studying the relationship between daily climate elements and the incidence of deaths caused by cardiovascular and respiratory diseases suggested events such as water shortages and drought, extreme variations in temperature, air pollution, and disruption of the healthcare system may negatively affect mortality and morbidity for cardiovascular and respiratory diseases in Iran.

**Conclusion and Discussion:** As climate change intensifies, the associated health risks escalate, posing new challenges for public health. The research demonstrates how climate change impacts cardiovascular and respiratory health, recognizing it as a developing issue requiring proper planning to address current challenges effectively.

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