

# CLIMATIC CHANGES AND CARDIOVASCULAR DISEASES: WHICH IS VULNERABLE?

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## TO THE EDITOR,

Cardiovascular diseases are leading factor of death around the world. Climate change is a global issue, but the amount of exposure to climate shifts, poor air quality, and extreme weather events is widely variable and defines each subject's vulnerability. In India there are 36 states which falls under various climatic zones from north to south. The health risks attributed to climate change have been known for decades; yet, climate change has emerged as one of the greatest and most fundamental threats to human health.

In particular, various epidemiological studies have been reported greater coronary heart disease (CHD) and acute myocardial infarction (AMI), valvular heart diseases (VHD) mortality both in winter and in extremely hot summers [1]. People living in densely populated areas in developing countries, in the absence of efficient public infrastructure and services, are more vulnerable to climate change-related events [2].

The latest Intergovernmental Panel on Climate Change report firmly concluded that a wide range of diseases, from vector-borne diseases to non-communicable diseases (NCDs) such as cardiovascular diseases (CVDs), are affected by climate change. Cardiovascular diseases are had also been shown to be climate-sensitive and are affected by environmental risk factors, such as extreme temperature, noise and air pollution [3].

Recent studies shows that more heart attack occurs in late December. The risk of Myocardial infraction (MI) is increased due to exposure to acute cold and rapid temperature change may cause blood vessels to constrict, which raises blood pressure and increases systolic functions.

On other hand valvular heart diseases and other cardiovascular diseases occurs during summer due dehydration which causes blood thickening, electrolytes imbalance and increases workload to the heart. This leads to stroke and arrhythmias. Older adults aged above >60 is more proven to get heart attacks during summer which increases blood pressure which increases dehydration, sweat regulation and aggravation of body temperature [4,5]. Therefore, both heat waves and cold waves carry its own ravage to affect cardiovascular system in low – middle income cities.

**Hence, there are few ideas to quell this:**

1. Staying in a moderate environment.
2. Dehydration is chiefly complainant in heat waves. Intake of fluid is necessary.
3. Limiting physical activities during summer.
4. Minimizing exposure to extreme cold to reduce strain to CVS
5. Manage stress
6. Limit the intake of food during winter holidays as it leads to obesity and slows down body's physiological process.

**Home – grown and medical practiced remedies are there to prevent us from the vulnerability of climatic modifications as follows:**

**During summer:**

1. Consuming water with fancy electrolytes properties to prevent dehydration.
2. Eat light (focus on water rich foods)
3. Seek for cooling properties.
4. Exercise wisely & avoid outdoor activities
5. Regular Monitoring for bp, dizziness and arrhythmias
6. Restrain from alcohol and caffeine consumption as it leads to severe dehydration.

**During winters:**

1. Avoid overexertion on outdoor activities
2. Consuming balanced diet, overconsuming leads to obesity and fat deposition on arteries.
3. Insulating clothing are must.
4. Monitor for seasonal affective disorder (SAD) winter holidays negatively increase mental health which leads to idiopathic causes of hypertension.

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