

Editorial

Heat Related Illness- Now a Days Burning Issue in Bangladesh

Chowdhury MI¹

Heat waves are prolonged periods of excessively hot weather that can have severe impacts on human health, infrastructure, and the environment. Understanding the causes and risks is crucial for preparedness. As global temperatures continue to rise due to climate change, the frequency, intensity, and duration of heat waves are expected to increase, posing growing challenges for communities around the world. Understanding the causes, impacts, and mitigation strategies for heat waves is crucial for protecting vulnerable populations and building resilient societies.¹

Because heat waves are 'relative' not absolute, meaning a heat wave in the Arctic will be defined differently to heat wave in the tropics, the World Meteorological Organization (WMO) has not adopted a standard definition. Two key characteristics of a heat wave are that the high temperatures must last multiple days, and they must exceed the 'normal', or average temperature for the same period in previous years.

The WMO uses a Heat Wave Duration Index (HWDI) where the maximum temperature is at

least 5°C above the climatological average for more than 5 days, however, some argue that this is less useful in regions where temperatures fall into a narrow range, like the tropics. Some countries use shorter durations, like 2+ days (USA), 3+ days (UK, Australia), and some require both daytime maximum and nighttime minimum temperatures to be above normal (India, Australia).²

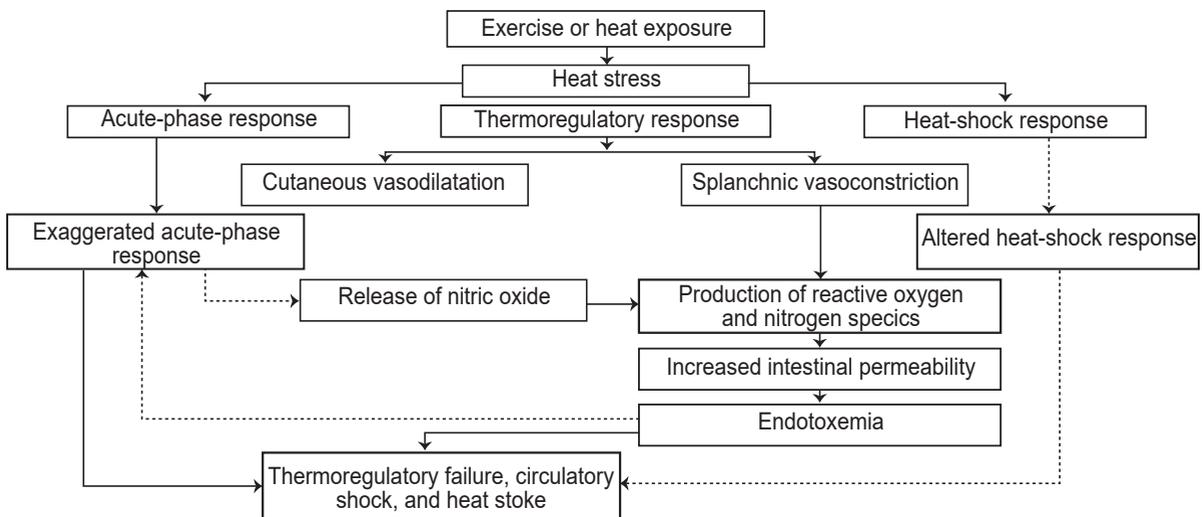
Heat-Related Illnesses

- ▶ Heat edema
- ▶ Heat rash (also known as prickly heat and miliaria)
- ▶ Heat cramps
- ▶ Heat tetany
- ▶ Heat syncope
- ▶ Heat exhaustion
- ▶ Heat stroke

Heat wave Classification by BMD:

- ▶ 36-38 °C Mild heat wave
- ▶ 38-40 °C Moderate heat wave
- ▶ 40-42 °C Severe heat wave
- ▶ > 42 °C Extreme heat wave

Pathophysiology of Heat wave:



1. Brig. Gen Md. Ismail Chowdhury, MBBS, FCPS (Medicine), MD (Neurology), Principal, Army Medical College Rangpur. Mobile: 01769-665653

Prevention and Preparedness Measures:

Preparing for and preventing the harmful effects of heat waves is crucial to safeguarding public health. Key prevention and preparedness measures include establishing early warning systems, improving community education and awareness, strengthening infrastructure resilience, and implementing targeted interventions for vulnerable populations.

Early warning systems can detect the onset of extreme heat events and trigger coordinated response protocols. These systems leverage meteorological data, health surveillance, and communication networks to alert authorities and the public in advance. Coupled with community education campaigns, people can take proactive steps to protect themselves, such as staying hydrated, seeking shade, and checking on at-risk individuals.

Ensuring critical infrastructure like power grids, transportation networks, and healthcare facilities can withstand prolonged heat is also vital. Upgrading building insulation, providing backup power sources, and enhancing emergency response planning can build resilience and minimize disruptions. Targeted interventions for vulnerable groups, such as the elderly, young children, and outdoor workers, ensure marginalized communities receive the support they need.³

Prevention and Preparedness Strategies:**Heat wave Forecasting:**

Closely monitor weather forecasts and heat wave alerts to anticipate extreme heat events. This allows early preparation and implementation of prevention measures.

Infrastructure Upgrades:

Invest in energy-efficient buildings, cooling centers, and shaded public spaces to provide relief during heat waves. Upgrade ventilation and insulation to enhance resilience.

Public Education:

Inform the public about heat-related health risks and prevention strategies through public awareness campaigns. Educate on early signs of heat-related illnesses.

Vulnerable Population Support:

Identify and provide targeted assistance to high-risk groups, such as the elderly, children,

and outdoor workers. Establish check-in systems and provide cooling resources.³

Immediate Actions during a Heat Wave:

- ❖ Stay Hydrated
- ❖ Seek Shade and Cool Environments
- ❖ Wear Lightweight, Light-Colored Clothing
- ❖ Limit Strenuous Activities
- ❖ Check on Vulnerable Individuals

Role of Government and Authorities:

- Setting Policy and Regulations
- Coordinating Emergency Response
- Public Awareness and Education
- Investing in Infrastructure

Conclusion and Call to actions:

In conclusion, the threat of heat waves is one that demands urgent attention and coordinated action. As our global climate continues to change, these extreme temperature events will only become more frequent and severe, posing significant risks to human health and well-being. The key takeaways from this presentation are clear: we must prioritize prevention and preparedness, take immediate actions to protect vulnerable populations during heat waves, and work collectively as governments, authorities, and communities to build long-term resilience to the impacts of a warming world.

References:

1. <https://www.lancetcountdown.org/data-platform/health-hazards-exposures-and-impacts/1-1-health-and-heat/1-1-5-heat-and-sentiment>
2. <https://wmo.int/publication-series/state-of-global-climate-2023>
3. National Guideline on Heat-Related Illness