

Figure: This map shows the expected number of extremely hot days in April in each county in the contiguous U.S. The forecast is based on the NOAA Climate Prediction Center's probabilistic outlook of temperatures being above, below, or near normal in June. A county's 'normal' temperature is based on the 30-year average from 1991–2020. An 'extremely hot day' is when the daily maximum temperature is above the 95th percentile value of the historical temperature distribution in that county. For more information on your county, please refer to the [Centers for Disease Control and Prevention \(CDC\) Heat and Health Tracker](#).

In May, **12 counties in Texas** are expected to have five or more extremely hot days. In these counties, the total population at risk is **615,328**. Extreme summer heat is already increasing in the U.S. and climate projections indicate that extreme heat events will become more frequent and intense in coming decades. [Heat-related deaths have been increasing in the U.S.](#), with approximately 1,602 occurring in 2021, 1,722 in 2022, and 2,302 in 2023.

Who is at high risk in the counties with the most extreme heat days?

Some communities face greater health risks from extreme heat given various risk factors they face. These communities include people who: are elderly and live alone, have existing health conditions such as cardiovascular disease, have poor access to healthcare, live in rural areas, have disabilities, work outdoors (or indoors with insufficient ventilation or mechanical cooling), make a low income, face difficulty paying utility bills, live in poor quality housing, and live in urban areas without adequate tree cover.

How warm will it be, and where, over the next 3 months?

NMME Forecast of TMP2m Anom. IC=202404 for Lead 1–2024M+1

Service members need to remember signs, symptoms of heat illness as weather warms

By Army Lt. Col. Joseph Jones, MD, MPH, Defense Centers for Public Health-Abandon March 20, 2023

"Heat-related illnesses can require medical treatment, last day long, and even be fatal – these conditions can be prevented."

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Heat-Related Emergency Department Visits — United States, May–September 2023

Weekly / April 18, 2024 / 77(15):324–329

[View suggested citation](#)

Summary

What is already known about this topic?

Unprecedented heat waves can affect all persons, but some are more sensitive to the effects of heat, including children and adults with underlying health conditions, pregnant women, and outdoor workers.

What is added by this report?

During the 2023 warm-season months (May–September), rates of emergency department visits for heat-related illness substantially increased across several U.S. regions compared with previous years, especially among males and adults aged 18–64 years.

What are the implications for public health practice?

Heat-related illness will continue to be a significant public health exposure as climate change results in hotter, longer, and more frequent heat waves.

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Service members need to remember signs, symptoms of heat illness as weather warms

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Figure: This map shows the expected number of extremely hot days in April in each county in the continental U.S. The forecast is based on the NOAA Climate Prediction Center's probabilistic outlook of temperatures being above, below, or near normal in June. A county's "normal" temperature is based on the 30-year average from 1991-2020. An "extremely hot day" is when the daily maximum temperature is above the 90th percentile value of the historical temperature distribution in that county. For more information on your county, please refer to the [Centers for Disease Control and Prevention \(CDC\) Heat and Health Tracker](#).

Who is at high risk in the counties with the most extreme heat days?

Some communities face greater health risks from extreme heat given various risk factors they face. These communities include people who are elderly and live alone, have existing health conditions such as cardiovascular disease, live in poor access to healthcare, live in hot areas, have disabilities, work outdoors (or indoors with insufficient ventilation or mechanical cooling), make a low income, face difficulty paying utility bills, live in poor quality housing, and live in areas with insufficient shade trees.

How warm will it be, and where, over the next 3 months?

NOAA Forecast of 1980th decile (10-2024) for April 1-2024

Heat-Related Emergency Department Visits - United States, May-September 2023

Reported by [Name] | [Date]

Summary

Heat-related emergency department (ED) visits are a significant public health concern in the United States. This report provides a summary of the findings from the National Health and Medical Research Council (NH&MRC) Heat-Related Emergency Department Visits Study, which examined the impact of heat on ED visits in the United States during the summer months of May through September 2023.

Key Findings:

- Heat-related ED visits increased significantly during the summer months, with a peak in July and August.
- Visits were most common among people aged 18-44, with a higher proportion of visits among people aged 18-24.
- Visits were most common among people living in the South and Midwest, with a higher proportion of visits among people living in the South.
- Visits were most common among people with pre-existing health conditions, particularly cardiovascular disease and respiratory conditions.
- Visits were most common among people who were working outdoors, particularly in construction and agriculture.

Implications:

These findings highlight the need for public health interventions to reduce the burden of heat-related ED visits. Key strategies include:


- Increasing public awareness of the risks of heat and the signs and symptoms of heat-related illness.
- Providing education and training to employers and workers on heat safety and hydration.
- Implementing measures to reduce heat exposure, such as providing shade and cooling breaks for outdoor workers.
- Improving access to healthcare and social support for vulnerable populations.

WHAT IS IT?

Core body temperature $>104^{\circ}\text{F}$ (40°C) and CNS dysfunction (e.g., confusion, agitation, seizures, coma)

600-700 deaths annually in the U.S.

Disproportionally affects athletes, outdoor workers, elderly, children, and those with chronic illnesses











- Thermoregulation Failure: Body can't dissipate heat effectively.
- **Heat Production vs. Heat Loss:**
- Increased metabolic heat (exercise).
- Decreased heat dissipation (high humidity).
- Cellular Impact: Protein denaturation, enzyme dysfunction, systemic inflammation.





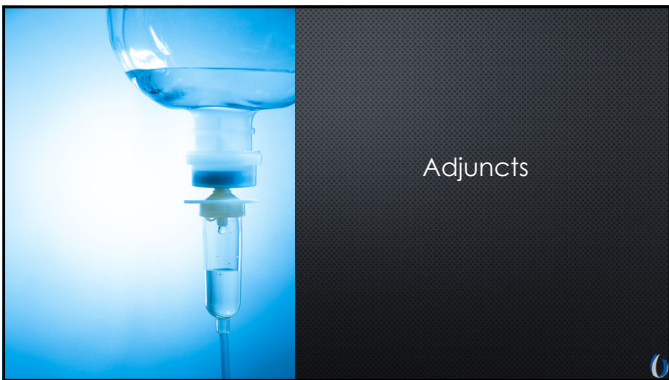


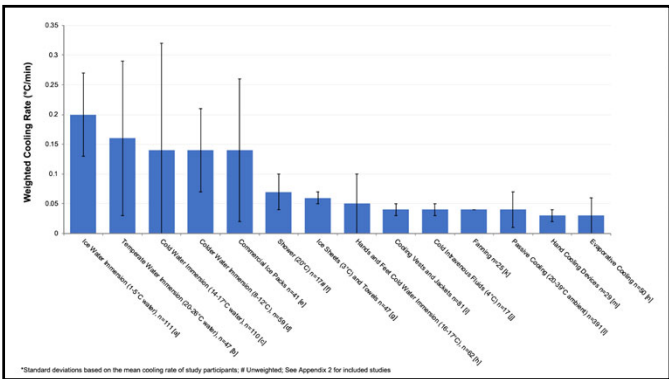


















COMPLICATIONS:

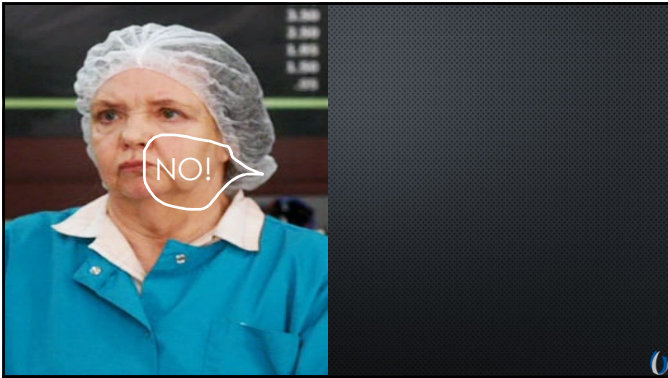
- Rhabdomyolysis: Monitor creatine kinase, aggressive hydration
- Acute Kidney Injury: Monitor renal function, maintain urine output.
- Coagulopathy: DIC management; monitor coagulation profile.
- Electrolyte Imbalances: Correct sodium, potassium, calcium.
- Burns



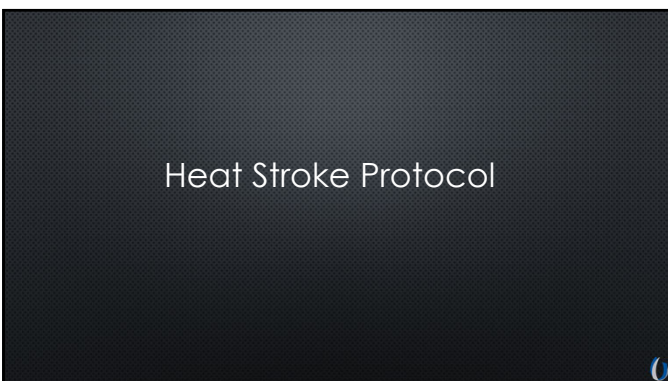


"We need ICE! Where is it?"

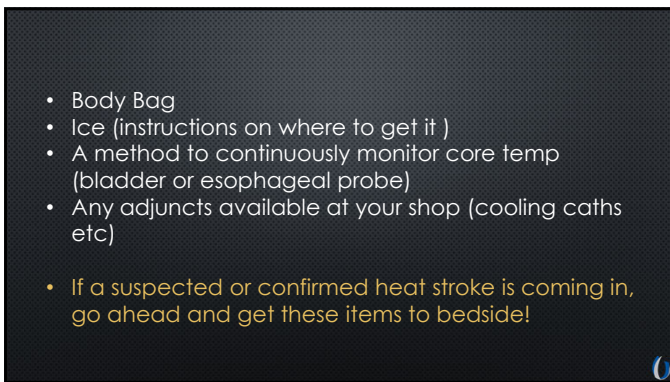
















23-year-old dies from heat stroke complications at a Pennsylvania half-marathon

A 23-year-old was taken to hospital after collapsing during a half-marathon in Pennsylvania and later died due to heat stroke complications.




The dangers of exertional heat stroke which killed Manly Sea Eagles player Keith Titmuss

Manly Sea Eagles player Keith Titmuss died from heat stroke after a training session.



One runner dead, 30 hospitalized after Tel Aviv half-marathon



Yotam Reizen is rescued by a medic after missing Friday's half-marathon in Tel Aviv, Israel. Other participants finish the race without incident.

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