

# Knowledge is Power: Protect Older Adults Against High and Sustained Heat Events

Summer is here and we need to be vigilant in caring for populations vulnerable to high and sustained heat events, as stretches of climate change–driven extreme heat are increasing (Falchetta et al., 2024). News headlines are driving it home, with frequent messages of new heat records surpassing previous ones. The year 2023 was the hottest on record (National Oceanic and Atmospheric Administration, 2024), and the Copernicus Climate Change Service (2024) reported that for the first time in history, we reached 12 consecutive months of record-breaking global temperatures. Young children, outdoor workers, and older adults are most vulnerable to extreme heat, but it is particularly dangerous for older adults who account for most heat-related deaths every year (Carlson et al., 2024). Further, communities of color and low-income neighborhoods have higher exposure to risks and fewer resources to prevent and prepare for extreme heat events (Fick & Young, 2023).

## UNDERLYING CHALLENGES FOR OLDER ADULTS

Aging involves reduced circulatory function and inefficient sweat gland activity, which decreases the body's ability to thermoregulate (Millyard et al., 2020). In addition, some medications, such as diuretics, sedatives, and

cardiac medications, reduce the body's ability to sweat, which can raise body temperature, putting those with chronic health conditions at greater risk (Millyard et al., 2020). Heat also impacts cognition and decision-making, which can lead to increased delirium, especially for those with mild cognitive impairment or dementia. Compounding these physiological issues is a common self-misperception of risk level, which is a complex self-assessment process. Older adults are more likely to see others in their own age bracket as at risk, but not themselves (Ratwatte et al., 2022), and that can lead to a delay in health-protective behaviors.

There are several socioeconomic factors that increase older adults' risk during extreme heat events, including living alone, living in housing without temperature control (e.g., no air conditioning [AC], lack of shade), having limited transportation, limited access to medical care, and being a low-income household. Further, there are specific considerations when assessing and addressing extreme challenges for older adults who live in rural versus urban areas. Rural counties have higher rates of emergency department visits related to heat exposure (Stermer, 2023). Older adults living in rural areas, especially those with low income, are less likely to have living space that is temperature controlled (e.g., AC). Urban neighborhoods may be 10°

warmer than their rural counterparts; however, there are more “cooling centers” available in urban settings than rural areas (Stermer, 2023). Cooling centers often double as warming centers in the winter and are generally funded through state or local governments and sometimes run by non-profit organizations. These centers typically provide air-conditioned spaces, drinking water, and potentially medical assistance (to find a local center call a state's 2-1-1 or local media outlet). Although some rural communities offer cooling centers, these centers could be >30 miles away from individuals who need them but may be unable to get there. With awareness of the challenges, it is imperative to plan ahead and prepare.

Be ready for extreme heat before it occurs:

- Understand individual risk based on age, chronic disease, medications, and living situation.
- Review medications to determine if effectiveness is compromised by increased heat and have a backup plan for keeping medicines at suggested temperature.
- Perform required maintenance on AC units routinely.
- Register to receive timely alerts for severe weather events, particularly heat waves.
- Learn how to interpret local heat warning systems.

TABLE 1

**Organizations Engaged in Providing Solutions, Tools, or Resources**

Organization (URL)	Mission/Tool
U.S. Centers for Disease Control and Prevention ( <a href="https://ephtracking.cdc.gov/Applications/heatTracker">https://ephtracking.cdc.gov/Applications/heatTracker</a> )	The Heat and Health Index combines historic temperature data and emergency medical services data on heat-related emergency responses from the past 3 years, as well as data on community characteristics, including pre-existing health conditions, sociodemographic information, and characteristics of the natural and built environment, to provide a final heat and health index ranking by ZIP code, which can be used to empower strategic, data-informed decision-making.
Alliance of Nurses for Healthy Environments ( <a href="https://envirn.org">https://envirn.org</a> )	Promoting healthy people and healthy environments by educating and leading the nursing profession, advancing research, incorporating evidence-based practice, and influencing policy.
Healthcare Without Harm ( <a href="https://noharm.org">https://noharm.org</a> )	To transform health care worldwide so that it reduces its environmental footprint, becomes a community anchor for sustainability, and a leader in the global movement for environmental health and justice.
Aging & Climate Change Clearinghouse ( <a href="https://climateaging.bctr.cornell.edu">https://climateaging.bctr.cornell.edu</a> )	Aims to be a central and trusted resource on the intersection of climate change and the rapidly increasing older population.
Atlantic Council Adrienne Arsht-Rockefeller Foundation Resilience Center ( <a href="https://heatactionplatform.onebillionresilient.org">https://heatactionplatform.onebillionresilient.org</a> )	To reach 1 billion people with resilience solutions by 2030; the Heat Action Platform is a living, engagement-oriented tool for city officials, practitioners, and financial institutions to find guidance, existing resources, and tailor-made solutions on reducing the human and economic impacts of extreme heat at regional or municipal levels.
Low Income Home Energy Assistance Program ( <a href="https://liheap-and-extreme-heat-hhs-acf.hub.arcgis.com">https://liheap-and-extreme-heat-hhs-acf.hub.arcgis.com</a> )	A federally funded program administered by states, tribes, and territories to provide assistance with expenses associated with home energy bills, energy crises, weatherization, and minor energy-related home repairs.

- Identify a cooling center and plan how to get there if needed.
- Create a call list with friends and family to stay connected and be a resource for one another.

During a prolonged heat event:

- Drink ice water to stay cool and ensure hydration.
- Monitor living space to ensure AC is working, and windows are closed.
- Wear a wet T-shirt during periods of rest (e.g., 2 hours).
- Submerge forearms in cold water or take a cool shower.
- Do not use an electric fan for temperatures >95°F (35°C).
- If it is necessary to spend time outdoors take frequent shade and hydration breaks and replenish electrolytes.
- Activate your call list and stay connected with friends and family.

**WHAT IS BEING DONE TO PREPARE COMMUNITIES?**

In parallel with the effects of the climate crisis itself, preparation efforts are diverse and depend on the salience of the problem at local levels. Government officials, health care practitioners, civil society organizations, and community members are engaging in different ways around the globe, but all with the desire to implement solutions and transform our collective capacity to adapt to a hotter world. For example, the California Governor's Office of Planning and Research includes the position of an Extreme Heat Program Manager. Health care organizations invested in improving our preparedness include the Alliance of Nurses for Healthy Environments and Healthcare Without Harm. Civil society includes a large and abundant range of organizations where collective resources are fueling solutions.

One example is the Adrienne Arsht-Rockefeller Foundation Resilience Center, which provides tools for city officials, practitioners, and financial institutions to reduce the human and economic impacts of extreme heat. **Table 1** provides a list of resources where you can find further information about extreme heat solutions and resources.

**CALL TO ACTION**

We call on everyone who provides care or services to families and older adults—those who work in government, for school systems, in the agriculture sector, or any community-based organizations—to raise awareness about the dangers of extreme heat and heat-related illness. Discuss the tips and resources we have offered here with your friends, family, colleagues, clients, or patients (regardless of age). It is up to those of us who

have access to the latest information to share that knowledge. We encourage you to be a force multiplier by taking the tips and resources we have provided here and sharing them broadly with others, but also with those nearest and dearest to your heart.

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