



Climate Change & Children's Health

EXTREME HEAT

Climate change is boosting temperatures and driving more frequent and intense extreme heat that is dangerous for children.

SCIENCE SUMMARY

Average temperatures in the contiguous U.S. are [2.6°F warmer now](#) than in 1970. Multi-day [heat waves](#) are lasting longer and occurring more often than they did in the 1960s. Overall warming, along with more frequent and intense extreme heat, are [attributed to human-caused climate change](#) — primarily from burning coal, oil, and methane gas (also known as natural gas).

Extreme heat [affects children's health and development](#). It can disrupt sleep, affect mood, and impact the ability to [concentrate and learn](#). [Extreme heat](#) is the [deadliest weather-related hazard](#) in the U.S., and [children](#) (aged 0-17 years) are among those [most vulnerable](#) to heat-related illness.

Young children sweat less and acclimate to heat more slowly than adults, and children may ignore or miss symptoms of heat stress. Around [9,000 high school athletes](#) in the U.S. are treated for exertional heat-related illness each year.

Heat illness [symptoms](#) can include headaches, nausea, cramps, or lethargy and may require urgent medical attention. Severe cases of [heat stroke](#) can cause organ damage or death. Research shows [nearly 12% of emergency department visits](#) by children across the U.S. between May and September are attributed to excessive heat. Further analysis suggests that a [temperature increase of 1°F](#) during those months could result in around 17,000 additional visits (about 113 more visits per day).

TOP TAKEAWAYS

- Extreme heat is the [deadliest weather-related hazard](#) in the U.S. Children — especially babies, younger kids, and athletes — are among those [most vulnerable](#) to heat-related illness.
- Average temperatures and extreme heat events have increased across the U.S. — and will [continue rising](#) without drastic cuts to heat-trapping carbon pollution.
- Without effective measures to adapt to a warming world, children will experience worse health impacts, including a potential increase in heat-related emergency department visits.
- Parents and caregivers can protect children's health, now and in the future, by reducing exposure to dangerous heat at home, at school, and during outdoor activities.

KEY TERMS

- **Extreme heat** – high temperatures (often accompanied by high humidity) that exceed local thresholds for safety and can pose health risks.
- **Heat illness** – heat exposure that causes symptoms such as dehydration, nausea, cramps, fever, lethargy, or, in severe cases, organ failure or death.
- **Heat wave** – a period of unusually hot weather in an area, lasting three or more days.

CHILDREN & CLIMATE CHANGE

Children are especially sensitive to climate change impacts, in part because they are still growing and developing and they spend more time outdoors. The effects of climate change experienced in childhood can have lifelong consequences on physical and mental health.

Children also have less control over their surrounding environments and less understanding of health risks. They rely on their adult caregivers — from parents and older family members to coaches and teachers — to help protect their health at home, in school, and when recreating outdoors.

EXTREME HEAT AND CHILDREN

Children are at risk from more frequent & intense heat



CLIMATE CENTRAL

Children are among those [most vulnerable](#) to heat-related illness. Without effective adaptation to a warming world, children will experience worse health impacts.

WHO'S MOST AT RISK?

Babies and younger children have difficulty regulating their core body temperature and can be more vulnerable to hot weather. Research shows that [infants have a greater risk of death](#) during the first week of life if born during a heat wave.

Communities of color may be exposed to higher urban heat and may have [less access to air conditioning](#), as demonstrated in several major U.S. cities. This amplifies dangerous conditions for children living, playing, and learning in these neighborhoods. Studies have shown that [urban heat islands](#) (developed areas that experience higher temperatures than surrounding, less developed areas) are [more likely](#) to be found in predominantly lower-income and non-white communities.

PROTECTING CHILDREN'S HEALTH

Be prepared. Check [temperature](#) and [heat risk](#) forecasts, and avoid outdoor activities during the hottest part of the day (usually midday). To minimize the risk of thermal burns, check that [playground equipment and surfaces](#) are not too hot. Plan to take frequent breaks in the shade or air conditioned spaces. Know the [symptoms](#) of heat-related illness and [be prepared](#) to take action.

Maintain hydration. Children may not recognize their thirst or could be reluctant to stop playing for a drink. Make sure kids [drink enough water](#) during outdoor play or sports.

Promote safe outdoor sport participation. Follow [sport safety guidelines](#) — including those related to [preseason heat-acclimatization](#) — to keep young athletes [safe and healthy](#). Coaches should know [how to respond](#) to heat-related emergencies.

Prevent hot car deaths. Car interiors can quickly become [dangerously hot](#). Never leave a child in a car, even for a short time. Check the backseat before getting out. Lock cars to prevent kids from climbing in unattended.

Cool off. Air conditioning in schools can [offset heat-related impacts to learning](#), and at home it can improve comfort and sleep. If air conditioning isn't available at home, kids can take a cool shower or drape damp cloths on their skin.

Commit to rapid, sustained cuts to carbon pollution from burning fossil fuels — now. With continued warming, [future generations](#) are likely to face accelerating change and intensifying risks — [particularly from heat waves](#). Ultimately, cutting carbon pollution is the most meaningful action to slow the rate of warming and set younger generations on a different path, toward a safer future.

ADDITIONAL RESOURCES

- [Climate Central's Extreme Heat Toolkit](#)
- Climate Central's [Climate Shift Index](#): Quantify the influence of human-caused climate change on daily temperatures
- Environmental Protection Agency's report, [Climate Change and Children's Health and Well-Being in the United States](#)

Endnotes & Acknowledgements

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Climate Central is an independent group of scientists and communicators who research and report the facts about climate change science, impacts, and solutions and how they affect people's lives. We are a policy-neutral 501(c)(3) nonprofit. For more information, visit [climatecentral.org](#)

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