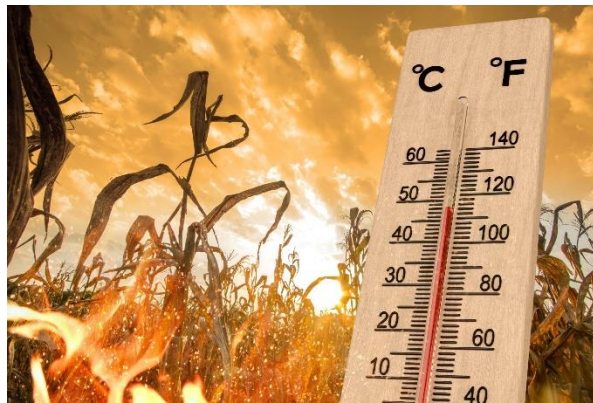


## **On Children's Health Impact of Extreme Heat and Heatwaves**

Researchers investigated the effects of heat waves and extreme heat events on [children's health](#) and how children can adapt to these climate-related threats.

Their findings indicate that extreme exposure to heat significantly increases risks such as preterm birth, low birth weight, and exacerbated [asthma](#) in children, underscoring the urgent need for research on adaptation measures to protect children's health in a warming world.



### **Neonatal Outcomes and Birth Risks**

The review found that extreme heat exposure during [pregnancy](#) significantly increases the risk of several unfavorable birth outcomes.

Twenty-six studies showed that heat waves and high temperatures during pregnancy are linked to preterm births (PTB), stillbirths, [premature rupture of membranes](#) (PROM), and low birth weight (LBW). For instance, a systematic review found that exposure to extreme heat raised the risk of PTB by 16% and LBW by 31%.

The last week of pregnancy seems particularly vulnerable to heat, but dangers are present throughout pregnancy. Studies also indicated that the risks are not evenly distributed—women with lower [socioeconomic status](#) (SES) and those in low-to-middle-income countries are more likely to experience these adverse outcomes.

Additionally, protection against these risks is more apparent in wealthier areas and among mothers with higher [education](#).

### **Emergency Department Visits and Hospitalizations**

Extreme heat also leads to increased visits to [emergency departments](#) (ED) and hospitalizations, especially in children.

Twenty-two studies, primarily conducted in the United States and Australia, found that heat waves are associated with increased ED visits for issues like electrolyte imbalances, dehydration, and other heat-related [illnesses](#).

Children from socioeconomically disadvantaged backgrounds were more likely to require medical attention during these events. For example, in the Australian city of Brisbane, infant [hospitalization rates](#) increased significantly during intense heatwaves.

However, results varied, with some studies, like one from Japan, finding no significant increase in [pediatric hospitalizations](#) for heat-related complications.

### **Morbidity, Mortality, and Respiratory Illness**

The review highlighted that heatwaves contribute to a range of health problems in children, including [respiratory issues](#) and, in some cases, increased mortality. For instance, in Varanasi, India, children under the age of four were found to be particularly vulnerable to mortality during heatwaves.

In terms of morbidity, studies from China reported that heatwaves worsened asthma symptoms in children, and a review found that poor air quality (since particulate matter, [carbon monoxide](#), nitrogen dioxide, and ozone concentrations may increase during heat waves) combined with extreme heat exacerbated respiratory illnesses.

Extreme heatwaves increase the risk of infectious diseases, particularly during European recreational water activities. Studies also link extreme heat to higher rates of E. coli in Italy and bacillary dysentery in China. Additionally, heat affects maize yields in Tanzania, potentially impacting child growth and [nutrition](#).

### **School Performance and Outdoor Activities**

Extreme heat impacts outdoor activities and can cause injuries, especially in children and [athletes](#). Farm workers, which may include children, often suffer from heat-related illnesses like dizziness and headaches due to inadequate protection.

Student-athletes are at risk of heat illness from exertion, with many schools lacking full preparedness. Children tend to play less in the heat, but shaded areas can encourage more activity. Heatwaves also increase [unintentional injuries](#), particularly in older adults.

Heat affects student comfort and performance in schools, so [air conditioning](#) and better building materials are suggested to improve conditions.

### **Conclusion**

This review underscores the urgent need for targeted adaptation measures to protect [vulnerable populations](#), particularly children, from the health risks associated with extreme heat. Understanding and addressing the inequities in heat-related health outcomes will be crucial for safeguarding public health as global temperatures continue to rise.

Children, especially neonates, are particularly vulnerable to extreme heat, leading to health issues like preterm births, stillbirths, [low birth weight](#), and heat-related illnesses. Children from disadvantaged backgrounds face even greater risks during heatwaves.

To mitigate these effects, the review suggests strategies like creating greener play areas, implementing heat warning systems, and adapting school environments to reduce heat exposure. Pediatricians are encouraged to counsel families on staying safe during heat waves, including [staying hydrated](#) and identifying heat illness symptoms.

However, the review also notes limitations, such as a lack of studies from the Global South and insufficient research on effective adaptation strategies. Future research should focus on these gaps to better protect children as [global temperatures](#) continue to rise.

**Source:**

<https://www.news-medical.net/news/20240828/Extreme-heat-puts-childrens-health-at-risk-urging-action-on-adaptation-measures.aspx>