THE PROBLEM: OUR CLIMATE IS GETTING HOTTER AND IT RISKS THE HEALTH OF MOMS AND BABIES

Climate change, a pattern of shifts in average weather conditions over many years, is widely recognized as an environmental emergency threatening human health. In the United States and around the world, annual average temperatures have been increasing since the beginning of the 20th century, and are expected to continue to rise. This consistent increase in average temperatures often triggers extreme heat conditions – temperatures that are much hotter than average for a particular date and place. Rising temperatures also trigger heat waves, prolonged periods of extreme heat, which have been occurring more frequently and severely in major U.S. cities since the mid-20th century. Unfortunately, this increased exposure to heat has negative impacts on people’s health, which can be even worse for pregnant people† and their infants.

Extreme heat is a leading cause of weather-related deaths in the United States, killing more than 600 people per year – more than all other weather-related deaths combined. High temperatures interfere with our body’s ability to release heat and regulate its own temperature. This is particularly true for pregnant people, whose body temperatures average higher than usual. Pregnancy affects the body’s ability to regulate temperature, making pregnant people more vulnerable to heat exposure and to serious adverse pregnancy outcomes, including a higher risk of preterm birth, having a baby with a low birth weight, and even infant mortality. This climate trend will continue to increase pregnant people’s risk of heat exposure nationwide, with alarming effects on maternal and infant health.

† We recognize and respect that pregnant, birthing, postpartum, and parenting people have a range of gender identities, and do not always identify as “women” or “mothers.” In recognition of the diversity of identities, this series prioritizes the use of non-gendered language where possible.
IT WAS VERY HOT. I FELT FEVERISH CHILLS... I HAD HEADACHES AND EVERYTHING, AND YOU FEEL DIZZY AND WANT TO THROW UP BECAUSE YOU ARE BENT OVER WHILE YOU ARE PREGNANT.

Systematic reviews (rigorous appraisals that collect, assess, and synthesize the best available evidence from existing studies) found that heat exposure during pregnancy hurts babies’ health.

- Maternal exposure to heat was associated with an increased risk of preterm and early term birth, low and decreased birth weight, stillbirth, and harmful newborn stress.¹⁰

- Pooled results of multiple studies found that preterm births increased by 16 percent during heat waves.¹¹

Other individual studies have found:

- Exposure to hot weather at the end of pregnancy shortened gestational age. For example, a one-day exposure to temperatures above 87 degrees Fahrenheit was associated with a decrease in the average length of pregnancy by five days.¹²

- Fetuses exposed to heat waves while in utero were more likely to suffer from fetal distress and breathing problems at birth.¹³

- Maternal exposure to heat waves during pregnancy was linked to a higher likelihood of one or more of the following risks: high blood pressure, high-blood pressure with seizures (eclampsia), uterine bleeding, and a cervix that opens too early and increases risk for preterm birth.¹⁴
Climate change is exacerbating the already large racial gap in maternal and infant health outcomes:

- A systematic review found that in four U.S. studies, compared to white women, Black or Hispanic†† women with heat exposure had double or more the risk of preterm birth or stillbirth.\(^{15}\)

- For each additional day a pregnant person spends in extreme heat during the second trimester, the odds of hospitalization increase by almost 5 percent.
  - For each additional day of extreme heat during the third trimester, the odds of hospitalization increase by 3 percent.\(^{16}\)
  - For Black women in particular, an additional day of exposure to extreme heat during the third trimester doubles the odds of hospitalization compared to white women (5 percent in Black women versus 2.6 percent in white women).\(^{17}\)

- Residential patterns resulting from racist redlining practices\(^{18}\) and lack of access to mitigating technologies like air conditioning have resulted in Black women being more exposed to extreme heat than white women.\(^{19}\)
  - In cities like Baltimore, Dallas, Denver, Miami, Portland, and New York, neighborhoods that are lower-income and have more residents of color can be 5 to 20 degrees Fahrenheit hotter in summer than wealthier, whiter parts of the same city.\(^{20}\)

- Because pregnancy naturally elevates the body’s temperature, pregnant people who work outdoors in high temperatures (such as farmworkers) have a higher risk for heat exhaustion and adverse newborn outcomes such as preterm birth, low birth weight, heart birth defects, and infant mortality.\(^{21}\)
  - Pregnant farmworkers work in fields where temperatures can rise as high as 120 degrees.\(^{22}\)
  - Female farmworkers lack information on the symptoms of heat-related illness (HRI), especially with respect to pregnancy health. This makes it difficult to recognize HRI symptoms (such as heat exhaustion, dehydration, and heat stroke) and differentiate them from other possible causes.\(^{23}\)

- Low-income pregnant women who live in cities often have little to no relief from the soaring temperatures due to older housing, the lack of greenery, and limited access to air conditioning.\(^{24}\)

†† To be more inclusive of diverse gender identities, this bulletin uses “Latinx” to describe people who trace their roots to Latin America, except where the research uses Latino/a and Hispanic, to ensure fidelity to the data.
RECOMMENDATIONS

1. Congress must mandate and fund – and state Medicaid agencies must cover – heat-mitigating technologies for pregnant people, such as air conditioning units and electric fans, as well as subsidies to cover the increased electrical costs associated with the technology.

2. Congress must mandate and fund the designation of maternal environmental risk zones and the development and implementation of heat-island cooling strategies to mitigate maternal heat risks in the designated zones.

3. Congress must pass the Pregnant Workers Fairness Act to help pregnant workers continue working and supporting their families without risking their health and the health of their pregnancies. This bill would ensure that workers with specific health requirements related to pregnancy, childbirth, or related medical conditions are not forced out of their jobs or denied reasonable workplace accommodations such as additional, more flexible breaks and work schedules, permission to sit instead of stand, or being permitted to carry a water bottle.

4. The federal government should strengthen mandatory standards for outdoor workers that ensure that they are provided the clean water, rest, and shade needed during high heat periods, and step up enforcement of these and existing regulations.

5. Develop and disseminate worker-facing educational materials in relevant languages about the dangers of, and how to prevent, heat-related illnesses, especially for pregnant workers.

6. Federal, state, and local policymakers must urgently implement policies to reduce the rate of climate change and mitigate its ongoing impacts.
REFERENCES


3 Ibid.


14 Ibid.

15 See note 11.


17 Ibid.


20 See note 18.


i See note 23.

ii See note 17.
ACKNOWLEDGMENTS

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