

Heat, floods, pests, disease, and death: What climate change means for people in prison

Without consistent access to relief or safer environments, incarcerated people are punished with deadly heat, increased biological threats, and flimsy emergency protocols.

by Leah Wang

Heatwaves and extreme weather events are now commonplace. States across the South and Southwest are experiencing record high temperatures (during the day *and* at night, which is [a big deal](#)). Meanwhile, the Northeast has been drenched in [more frequent, torrential rainfall](#) and flash flooding. Prisons and jails nationwide aren't insulated from these events, yet we rarely see how bad the conditions are for the [millions of people](#) locked within them.

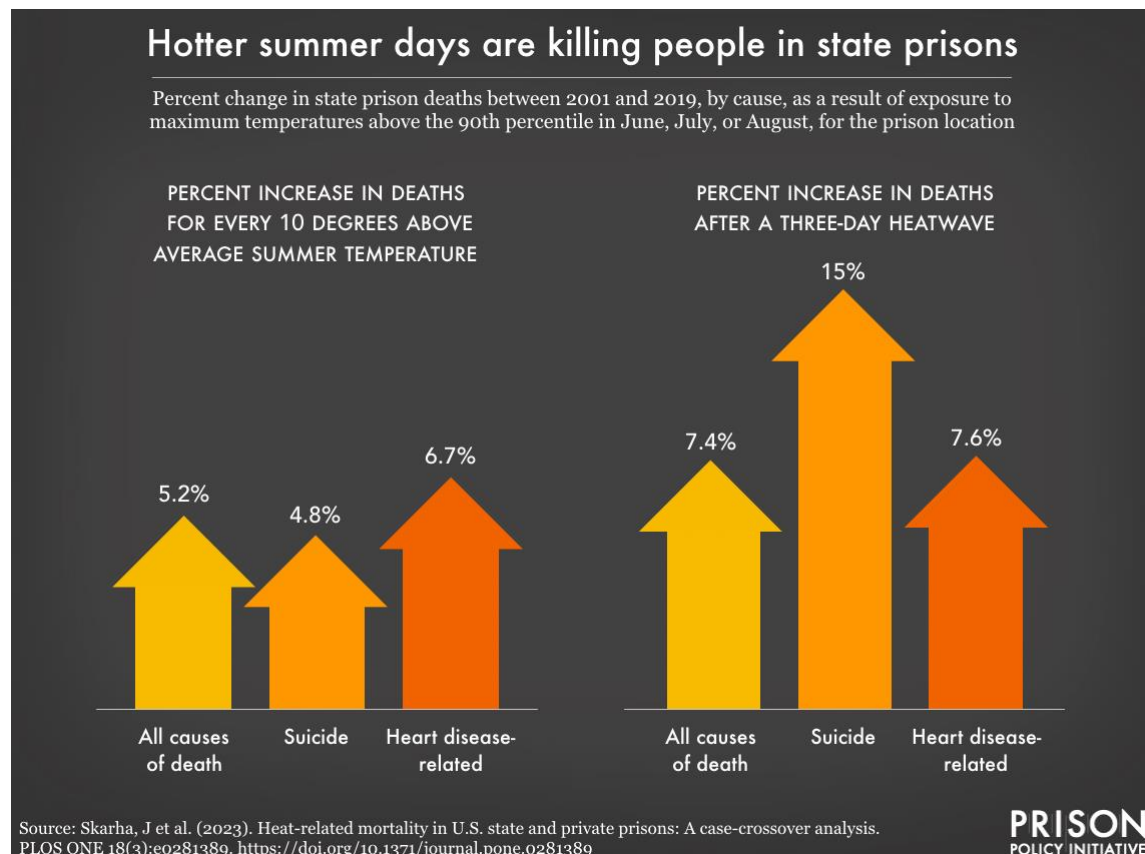
Hopefully, readers have seen [our prior work](#) — or any of [several other powerful essays](#) — explaining the ways in which extreme heat, combined with a lack of air-conditioned spaces and cooling measures, is especially harmful to people behind bars. Some have described the experience as being trapped in heat-retaining “[convection ovens](#).” We've also highlighted some of the [environmentally disastrous ways](#) prisons are sited and operated.

In this briefing, we present new findings from a nationwide, epidemiological study showing a strong relationship between extreme heat and deaths in prisons—especially in the Northeast. We also explain why extreme heat isn't an isolated danger — it's wrapped up in other hazards like pests and diseases guaranteed to make prison life miserable, if not fatal.

New research confirms what we already know: Extreme heat and deaths are linked in prisons nationwide.

A group of researchers, led by epidemiologist Julianne Skarha, offer [new evidence](#) that the heat we've been experiencing is particularly deadly for incarcerated people across the U.S. Using two datasets — [annual deaths](#) in state prisons from the Bureau of Justice Statistics, and hourly temperature

data from the [North American Land Data Assimilation System](#) — the researchers looked at unusually high temperatures occurring in the summer months at the geographic location of prisons.



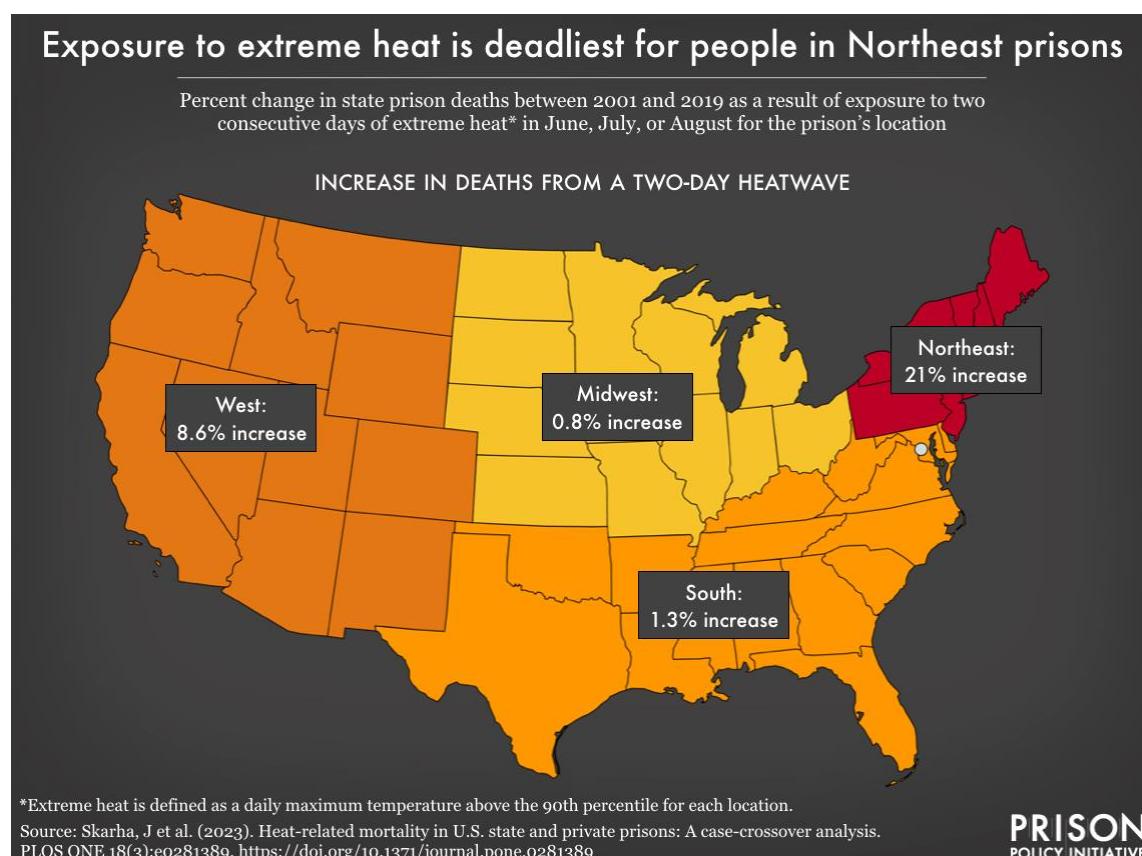
Using established public health research methods, the study’s authors were able to look at exposure to a “risk” or an event — in this case, hotter-than-average days or multi-day heatwaves, and observe an acute outcome — deaths in state prisons (categorized as suicide, heart disease, or death from any cause). They examined deaths that occurred up to three days after each heat event.

As expected, unusual heat was associated with higher overall mortality. The researchers found for every 10 degree increase above the prison location’s mean summer temperature, nearly 5% of deaths (from all causes) occurring there could be attributed to the heat. Even the days following a hotter-than-average day were associated with deaths, although the risk of heat-related death declined, suggesting that mitigating heat right away is crucial.

Further, an *extreme* heat day (one that falls within the hottest 10% of days for a particular location) was associated with a 3.5% increase in deaths.

These extremely hot days had a delayed effect on suicides, which increased by 23% over the three days that followed. As if prison environments weren't already damaging enough to [mental health](#), the oppressive heat and a prison's failure to provide relief from it can drive someone into unbearable distress.

Two- and three-day heatwaves (defined as consecutive days of extreme heat) were even more dangerous, increasing deaths by 5.5% and 7.4%, respectively. There were similar trends with deaths from suicide and heart disease, but they were not statistically significant.



The study's authors also found that the impact of heat on mortality was highest in the Northeast region, which tracks with evidence suggesting [heat-acclimated](#) populations might [fare better](#) in a hotter world. So even though states like Texas are rightfully scorned for failing to provide livable environments for people in prisons, more temperate states (like those in [New England](#)) aren't off the hook either.

The results, as terrible as they are, likely underestimate the deadly effect of heat in prisons without A/C, as air conditioning data were not available for this analysis. The researchers also noted that they didn't have data on the type of housing individuals were held in before they died, such as a solitary confinement cell. Despite these limitations, Skarha et al. offer the first

nationwide, peer-reviewed publication showing that prisons, which are [deadly places](#) already, are heating people to death.

Prisons fail to provide desperately needed relief from heat and other emergencies.

As we mentioned in [our 2019 investigation](#), air conditioning is not a universal feature of prison buildings in famously hot states, even though it is nearly ubiquitous in homes across the South. Short of prison A/C — which states will spend more money fighting through [lawsuits](#) than they would installing — incarcerated people are seldom provided other forms of temporary relief. A [survey](#) conducted in California prisons by the Ella Baker Center found that most respondents didn't have access to more water or showers on particularly hot days. Meanwhile, 62% of respondents reported experiencing heat exhaustion and 41% reported heat cramps due to extreme heat and/or nearby wildfires. Two-thirds (67%) of respondents said they were worried or extremely worried about their physical safety in the case of extreme heat at their prison.

And even though judges in multiple states have ruled that subjecting incarcerated people to extreme temperatures is unconstitutional, they haven't mandated any relief measures. Public opposition to providing “comfortable” carceral spaces has further compelled prison officials to do nothing about this life-or-death issue.

Even the mild relief of a fan or a towel can be hard to come by in prisons. These items might be available, though unaffordable, through a [commissary](#): In one federal prison, where most people make [less than \\$0.50 per hour](#), a fan costs \$30.70. And in Oregon, where a heat wave brought 100-plus degree days in 2021, one prison offered special “cooling” towels for \$18 — a [nearly 100% markup](#).

SUNDRY ITEMS			
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Reading Glasses		Strength 1.0 - 2.75	3.90
Plastic Hangers (5)	0.45	Mesh Bag	14.95
Shave Bag (1)	8.25	Ajax	1.90
Gel Insoles	19.50	Odor Eater Insole (2) +	7.15
Bowl w/ Lid (1)	2.30	Insulated Mug	2.35
Water Bottle (1)	3.90	Racquet Balls	6.50
Typewriter Ribbon	15.60	Pickle Balls	14.35
Spork	0.20	Typewriter Correction	3.90
Cutlery Set	2.50	Rain Poncho	2.60
Head Bands	1.70	Wrist Bands	1.70
Fine Mkr (10pk) (1) +	2.10	Mirror	2.60
Photo Album	2.80	Clr Pencil 12/bx (1) +	2.75
Playing Cards	3.60	Pens @	0.15
Pencils (EA)(2) @	0.20	Address Book (1)	3.45
9 1/2x12" Envelope (5)@	0.15	Pinochle Cards	2.25
Legal Pad	2.00	Envelopes (50ct) (1) @	1.30
Fan	30.70	Composition Notebook	3.10
Locker Buddy	14.65	Legal Document Folder	2.70
Locker Buddy Hooks	5.50	Clip On Sunglasses	3.65
		RonRon Sunglasses	4.95

It would take more than a week's worth of earnings at a federal prison in Texas for most people to afford this electric fan.

Aside from placing the burden on incarcerated people to gather these threadbare comforts, prisons are largely unprepared to respond to facility-wide emergencies and disasters.

There is no national mandate for correctional facilities to form emergency preparedness plans, to have evacuation drills, or to train staff on emergency protocols.

The same Ella Baker Center survey found that the vast majority of incarcerated respondents did not know of any plan describing their prison's emergency procedures for extreme heat (72% were not aware), extreme cold (88%), wildfires (88%), or flooding (92%).

Extreme weather is intertwined with other biological and social threats, leaving people in prisons highly vulnerable.

As we and others have been saying for years, increasing heat is especially dangerous for people in prisons. But the heat itself is not the only issue. What other aspects of the prison environment will worsen as the climate changes?

Mosquito infestation

Mounting heat and humidity will lead to changes in pest populations nationwide, and incarcerated people will only fare as well as state mitigation strategies will allow. In Utah, for example, where a brand new prison [recently opened](#) near the wetlands of the Great Salt Lake, mosquito populations are thriving in ideal conditions. Despite [great concern](#) about this decidedly bad location, the mosquito problem at Utah State Prison has gotten so bad that prison officials have been scrambling for solutions.

Utah prison officials' ill-conceived responses include selling insect repellent in the prison commissary (instead of providing it for free) and training staff to use pesticides to kill mosquitoes, leading to [unintended consequences](#) for other parts of the sensitive ecosystem. Such consequences are also borne by the thousands of people who live and work in the area. Seeing as biological diversity is our [best defense](#) against climate change, it's devastating to see how the new Utah prison is proceeding to destroy such an important, fragile place, while putting its incarcerated population [at risk](#) of mosquito-borne illness, flooding, and contaminated water.

Infectious diseases

As we detailed in our comprehensive report about [the health of incarcerated people](#), and over three years of [COVID-19](#) reporting, infectious diseases disproportionately impact those in prisons, where modern medicine and public health directives [go ignored](#).

The number of infectious disease outbreaks (by growing populations of mosquitoes and ticks, for example) has risen along with average global temperatures. There is [some emerging evidence](#), for example, that climate change is contributing to a rise in Valley Fever, a deadly fungal infection that has [plagued people imprisoned in the Southwest](#) for years. Based on decades of evidence, prisons and jails aren't likely to be prepared for the increasing threats of bacterial, viral, and [fungal](#) infections.

Violence

As the weather warms, prisons will demonstrate the well-documented relationship between [heat and violence](#). A July 2021 [study](#) found unmitigated exposure to heat — even after accounting for dozens of other factors — increased violent events in Mississippi prisons.

Aside from the physical harm of violence and the [mental health](#) damage caused by living in a violent place, the study’s authors predict that violence under “thermal stress” may perpetuate mass incarceration: People pushed to act violently in prison are more likely to have disciplinary infractions that delay their release, and the overall harsher prison conditions caused by heat may increase the odds of recidivism once released.

Clearly, lawmakers should consider the immense social and financial benefits that a universal necessity like air conditioning could have in their state prisons.

Environmental emergencies are the norm in a climate-changed world. While we focused on heat-related dangers in this briefing, the kinds of failures we described are present in how prisons deal with other weather events as well: Floods, fires, hurricanes, cold snaps, and blizzards are all particularly threatening to the lives of incarcerated people.

[Deteriorating infrastructure](#) and harmful policies around [charging fees](#) for medical care, privatizing [care](#) and [commissary](#) items, and [failed emergency protocols](#) are intensified by an increasingly volatile environment.

Even though incarcerated people regularly organize for their own survival needs, they face an especially daunting challenge building [climate resilience](#). The deck that is stacked against them grows as our surroundings become more inhospitable. And the impacts of climate change on incarcerated populations will ripple out to [surrounding communities](#), making this an issue we should all care about. Places of confinement and the people inside them must be part of any effort to reduce the harms of climate change. The status quo is nothing short of [an overlooked crisis](#).

For more information, including detailed footnotes, see [the full version of this briefing](#) on our website.

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