

[You, Me And Them: Experiencing Discrimination In America](#)

Scientists Start To Tease Out The Subtler Ways Racism Hurts Health

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Kim Ryu for NPR

The day Dr. Roberto Montenegro finished his Ph.D. was memorable. But not for the right reasons.

"I still cringe when I think about it," says Montenegro.

It had started well. His colleagues at UCLA had taken him and his girlfriend (now wife) out to a fancy restaurant to celebrate.

"I was dressed up in the fanciest suit I had at the time and my wife looked beautiful, like always," he says. "We laughed and we ate and we were excited we didn't have to pay for this."

Montenegro was elated — celebrating a hard-won step toward his dream of becoming a physician-scientist. There had been so many late nights, so much work. But now, he had a Ph.D. in sociology and was headed to medical school at the University of Utah.

"I felt like a king," Montenegro [wrote](#) in an article for the journal *JAMA* last year. At the end of the evening, the couple got in line to pick up their car from the valet outside. They were third in line when a Jaguar pulled up to the curb.

"And you see this woman get out of her car," says Montenegro. The woman must not have seen the valets, though they were wearing red vests.



[You, Me And Them: Experiencing Discrimination In America](#)

[Looking For A Home When Your Name Is Hispanic And Finding Discrimination Instead](#)

"She passes the first couple, she passes the second couple, she gets to me and she hands me her keys," says Montenegro.

The valets, Montenegro says, looked Latino — like him. The woman, who wasn't, assumed he was a valet, too. He was so shocked he just took the keys as she dropped them into his hand.

"I didn't know what to say, what to do," Montenegro says. "But I vividly remember turning red, and I don't often turn red. And I remember my heart pounding. I remember feeling really confused and hurt and angry."

Five minutes later, still standing in line waiting for his car, it happened again. Another person handed him their keys.

"I was at the pinnacle of my celebration, and with one swift action, I was dismissed, he wrote in *JAMA*. "I was made invisible."



[You, Me And Them: Experiencing Discrimination In America](#)

[Racism Is Literally Bad For Your Health](#)

It wasn't the first time that Montenegro had run into racist assumptions, and it wouldn't be the last. At various research conferences, academics he doesn't know have tried to order drinks from him. In medical school and during his medical residency, he was sometimes assumed to be a technician at the hospital — even when wearing his white doctor's coat.

"It makes you question yourself and makes you feel confused and shocked," he says. "It was a constant reminder of feeling like I would never fit in."

[Montenegro](#), who now has an M.D. in addition to his Ph.D., is a postdoctoral fellow in child psychiatry at Seattle Children's Hospital. He is part of [a growing group of scientists](#) who are trying to answer some big, complicated questions: What does the repeated experience of discrimination actually do to your body? And could such experiences be partially responsible for health disparities that exist among different groups in America?



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[Coping While Black: A Season Of Traumatic News Takes A Psychological Toll](#)

"Individually these incidents seem benign," Montenegro says. "But cumulatively I believe that they act like sort of low-grade microtraumas that can that end up hurting you and your biology. It's not just having your feelings hurt. It's having your biology hurt as well."

A poll recently released by NPR, the Robert Wood Johnson Foundation and the Harvard T.H. Chan School of Public Health found that roughly a third of Latinos in America report they've experienced various kinds of discrimination in their lives based on ethnicity — including when applying for jobs, being paid or promoted equally, seeking housing or experiencing ethnic slurs or offensive comments or assumptions.

[Amani Nuru-Jeter](#), a social epidemiologist at the University of California, Berkeley, is another researcher working to find out how, as she puts it, racism gets under the skin. "How does the lived and social experience of race turn into racial differences in health — into higher levels of Type 2 diabetes or cardiovascular disease or higher rates of infant mortality?"

For example, black children are about [twice as likely](#) as white children to develop asthma, health statistics suggest. And racial and ethnic [gaps in infant mortality](#) have persisted for as long as researchers have been collecting data. People with diabetes who are members of racial and ethnic minorities are [more likely](#) to have complications like kidney failure, or to require amputations.

Genetics might partially explain some of the differences, Nuru-Jeter says. Research has suggested that different populations may [respond differently to some asthma drugs](#), for example.



Amani Nuru-Jeter (left) and her team (from left) Nadia Safaeinili, Zuelma Esquivel Contreras and Samantha Ang are studying the ways stress can play a role in health disparities.

Jim Block/Courtesy of University of California, Berkeley

"But it's not an adequate explanation for the very persistent dramatic differences we see in health outcomes between racial groups," she says. And public health researchers [have found](#) that health disparities remain even after they take into account any differences in income and education.

Nuru-Jeter and others hypothesize that chronic stress might be a key way racism contributes to health disparities. The idea is that the stress of experiencing discrimination over and over might wear you down physically over time.



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[Childhood Stress May Prime Pump For Chronic Disease Later](#)

For example, let's go back to how Montenegro remembers feeling that night when strangers assumed he was a valet. He said he was "turning red," his heart was "pounding." Those are signs his body was feeling acutely stressed.

"When you start to worry about something, whether that's race or something else, then that initiates a biological stress response," says Nuru-Jeter.

Hormones like adrenaline and cortisol shoot up, readying your body to flee or fight. Those hormones can help you kick into action to escape a wild animal, for example, or to run after a bus. Under such circumstances, the ability to experience stress and quickly respond can be benign — and valuable.

Whatever the source of the perceived threat, the physical response — higher levels of stress hormones, a faster heart rate — usually subside once the threat has passed.

"That's what we expect to happen," says Nuru-Jeter.

But research suggests bad things happen when your body has to [gear up for threats too often](#), consistently washing itself in stress hormones.

"Prolonged elevation [and] circulation of the stress hormones in our bodies can be very toxic and compromise our body's ability to regulate key biological systems like our cardiovascular system, our inflammatory system, our neuroendocrine system," Nuru-Jeter says. "It just gets us really out of whack and leaves us susceptible to a bunch of poor health outcomes."

A number of small studies have [documented](#) similar stress reactions in response to racism, and even in response to [the mere expectation](#) of a racist encounter.



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[Is It Time To Stop Using Race In Medical Research?](#)

In studying black women, for example, she has found that chronic stress from frequent racist encounters is associated with [chronic low-grade inflammation](#) — a little like having a low fever all the time. Nuru-Jeter thinks it might be a sign that experiencing discrimination might dysregulate the body in a way that, over time, could put someone at a higher risk for a condition like heart disease.

Now, this kind of research is complicated. There's no thermometer that measures degrees of racism, and it's not like scientists can take a group of people, expose some of them to discrimination, and then see how they fare compared with others.

"Unless we could experimentally assign people to racist or nonracist experiences over a life course, we can't make causal connections," says [Zaneta Thayer](#), a biological anthropologist at Dartmouth, who is currently looking into how discrimination experiences might influence multiple aspects of stress physiology, including cortisol and heart rate variability.

So, researchers find [correlations](#), not causal links.

For example, Thayer studied 55 pregnant women in Auckland, New Zealand, and [found that](#) women who said they experienced discrimination had higher evening stress hormone levels late in pregnancy than other women who didn't cite frequent discrimination. Another study, at Duke University, [found that](#) black students had higher levels of stress hormones after they heard reports of a violent, racist crime on campus.

The connection isn't just with hormones. Other scientists have found correlations between discrimination and various measures of accelerated aging, including the [tips of people's chromosomes](#) and subtle [alterations](#) in gene activity.

Individually, such studies are rarely conclusive, Thayer says. "There are always more questions to ask."

But collectively, she says, they form a compelling picture of how discrimination, stress and poor health might be related.

And sometimes, in rare situations, researchers do get a slightly sharper glimpse of how such a connection may be playing out.



A slaughterhouse and meatpacking plant in Postville, Iowa, owned by the firm Agriprocessors in 2008, was the site of a major immigration raid that year by U.S. Immigration and Customs Enforcement. The raid sent ripples throughout the state and may even have affected the unborn children of some Iowa residents who were pregnant at the time.

[Matthew Walleser/Wikipedia](#)

On May 12, 2008, about 900 agents with the U.S. Immigration and Customs Enforcement — including some who arrived in a couple of Black Hawk helicopters — raided a meat processing plant in Postville, Iowa. They were looking for people who were working illegally in the U.S.

"You could time exactly when it happened," says [Arline T. Geronimus](#), a behavioral scientist at the University of Michigan who has studied the event. "It was a surprise, and it was quite extreme."

According to some witnesses, the [agents handcuffed](#) almost everyone they encountered who looked Latino. They ended up arresting more than a tenth of the town's population, detaining many for days at a fairground.

According to Zoe Lofgren, a California representative who chaired [a congressional hearing](#) on the Postville raid, detainees were treated "like cattle."

"The information suggests that the people charged were rounded up, herded into a cattle arena, prodded down a cattle chute, coerced into guilty pleas and then [sent] to federal prison," Lofgren said at the hearing. "This looks and feels like a cattle auction, not a criminal prosecution in the United States of America."

AP YouTube

The people arrested were charged with criminal fraud for knowingly working under false Social Security numbers, despite allegations of [judicial misconduct](#) and [reports](#) that few of the employees were actually guilty of that crime.

"People lost their jobs," Geronimus says. "People were afraid to go home in case there would be raids in their homes. They were sleeping in church pews. Some fled the state."

By all accounts, it was an extremely stressful event for the approximately 400 people who were arrested and their families.

But the event also sent ripples throughout the state. Apparently, as Geronimus and her colleagues [reported](#) this year in the *International Journal of Epidemiology*, it may even have affected the unborn children of some Iowa residents who were pregnant at the time.

In the months after the raid, Geronimus says, some Latina women living in Iowa started giving birth to slightly smaller babies.

The researchers looked at birth certificates of more than 52,000 babies born in Iowa, including those born in the nine months following the raid, and in the same nine-month period one and two years earlier. They found a small but noticeable increase in the percentage of babies who weighed less than 5 1/2 pounds — the definition of what pediatricians term [low birth weight](#) — born to Latina moms.

"Pregnant women of Latino descent throughout the state of Iowa — including those who were U.S. citizens, including those who were not right at Postville — experienced, on average, about a 24 percent greater risk of their babies having a low birth weight than they had in that very same period of time the previous year," Geronimus says.



Shots - Health News

Knowing Someone Who Faced Discrimination May Affect Blood Pressure

Before the raid, 4.7 percent of babies born to white moms were low birth weight. After the raid, that number dropped to 4.4 percent. Meanwhile, the percentage of babies with a low birth weight born to foreign-born Latina moms went up from 4.5 percent (76 babies) to 5.6 percent (98 babies). And it went up for the babies of U.S.-born Latina moms, too — from 5.3 percent (42 babies) to 6.4 percent (55 babies).

Overall, that's a difference of just a few dozen children, each probably born just a few ounces underweight. But at that stage of life, a few ounces can make [a difference](#), Geronimus says. Babies born small are at higher risk of dying in infancy and of having health and developmental problems later on.

"Low birth weight in general is not higher in the Latino population than in the white population," Geronimus says. "And in Iowa it was not higher before the raid, and it was not higher years after the raid. But there is a spike that happens to be exactly when the raid was."

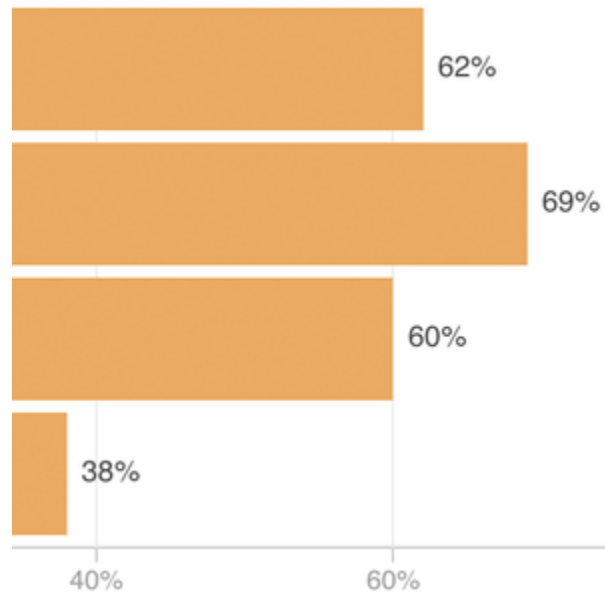
And it's worth noting, she says, that the effect even occurred among babies born to Latina moms who were U.S. citizens — people who shouldn't have been worried about being arrested or deported.

"So why did it suddenly spike?" Geronimus asks. "Well, there's a lot of research that suggests that stressful events during pregnancy can result in some complex immune, inflammatory and endocrine pathways and can increase the risk of low birth weight."

She and her colleagues think the poor treatment of people who "looked Latino" to the immigration agents might have caused additional stress among women outside the immediate area of the raid who were pregnant around that time.

"People could begin to worry this could happen to them or to people they know or in their communities," she says. "And those worries alone can activate these physiological stress responses, even if they never did have a raid in their own hometown."

In fact, other researchers have noticed similar connections.



[Code Switch](#)

[Poll: 6 In 10 Black Americans Say Police Unfairly Stopped Them Or A Relative](#)

In the six months following the Sept. 11 attacks in the Eastern U.S., babies born in California to moms with Arabic-sounding names had [a higher risk](#) of being born small or preterm than observed in that group during the same time period the year before — a change that didn't apply to other babies born in the state.

Both studies investigated the impacts of specific, dramatic events — and the results were consistent.

"You could time exactly when it happened," says Geronimus. "We could measure before and after."

But she views such events as merely slivers of insight into patterns that may quietly be happening on a much larger scale among many populations. Patterns that are harder to tease out and measure — like the effects of centuries of racism against black Americans, or a persistent series of incidents involving police brutality against minorities.

Maybe, Geronimus says, the cascade of stress that such events initiate sets the stage for health disparities in a generation of children — before they even enter the world.

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