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Racism Causes Preterm Birth

IF YOU NEED a reason to feel hopeful about America, I can recommend traveling around the country to talk to the people who take care of the tiniest, most vulnerable Americans. But if prematurity illuminates the extraordinary, it also reveals cruelty embedded in our society. When you consider which communities suffer the most, it becomes clear that unjust inequalities drive preterm birth in a direct and literal way. We can't understand premature birth if we don't understand why some people experience it more than others.

The United States as a whole is suffering such a high rate of prematurity that it qualifies as a public health crisis. Despite our advanced technologies and resources, the United States is the most dangerous place in the industrialized world to have a baby, both for mothers and their children. On the face of it, it's hard to understand.

Researchers and public health experts who work with the communities hardest hit by prematurity have insight into this, and it adds up to one big picture: American women are stressed. And study after study has shown that clinically significant stress is a major risk factor for preterm birth. "Stress" does not mean that pregnant

women should just calm down because getting upset is bad for the baby. This is not about individual women who need to do some deep breathing. It is about societal forces that leave women and families hung out to dry—and some much more than others.

In the clinical sense, "stress" does not mean a tight deadline, a demanding boss, a traffic jam, the PTA meeting getting moved. (Normal life can be demanding, but it's just not a risk factor for preterm birth.) The kind of stress that matters here means grappling with serious mental and physical illnesses in yourself or close family; income, food, and housing insecurity; complicated grief; unsafe working conditions; the threat of gun or police violence; lack of access to health care and child care. These are issues that hit some American women hard. For these women, there is a lack of a social safety net; there is a lack of a sense of safety.

This leads to predictable and measurable hormonal and cardiovascular effects on the body. Scientists call this "allostatic load"—a measure of the hormones that the body releases in response to stress. These hormones, like corticosteroids and adrenaline, are meant to help humans deal with life-threatening situations. In the short term, they protect us by allowing us to respond quickly to danger, acting on our bodies and brains in myriad ways: raising our blood pressure, altering our metabolism, and sharpening our attention. But when these hormones flood our system too often over the long term—like a revving engine flooded with gasoline—it is harmful.

The exact mechanisms behind this are still being studied, but high allostatic load is associated with cardiovascular disease, hypertension, and other health problems that in turn can lead to a premature birth. Or a stress-associated hormonal and immune response may bring on preterm labor or other problems that necessitate preterm birth. Preterm birth can be a physiological consequence of

living with too much anxiety and fear. A body under this kind of stress diverts its resources to survival; it isn't sure it can afford a pregnancy.

Among these stresses, there is one very specific kind of stress that is a main driver of the high preterm birth rate in the United States: the stress that comes from living with racism in its many forms, particularly racism against black women. In fact, studies have shown over and over a link between the experience of racism and giving birth early.

On medical lists of risk factors for preterm birth, black or African American race is often cited. But that is not accurate: It's not an inherent risk somehow conferred by skin color; it's a risk that comes from environment and experiences. But pinning the blame on the color of a woman's skin has sunk into our collective consciousness. Even, in some cases, the consciousnesses of black women themselves.

When Dr. Joia Crear-Perry gave birth to her son at 22 weeks in 1996, she blamed herself. Many mothers feel this way—*Was it because I picked up that heavy box? Was it because I drank coffee? Was it because I was on my feet all day? Because I worried too much? Because we had sex that night? Because I gained too much weight?* But Crear-Perry was worried about something more pernicious—a feeling that lay blame not on anything she'd *done* but on who she *was*. She knew that as a completely healthy twenty-four-year-old woman with a planned pregnancy, she didn't have any risk factors—none at all—except one. "I believed it was my blackness," she told me, more than two decades later. "I assumed there was something inherently wrong with me because that's what I was taught."

Black American women give birth early about 50 percent more often than other American women. The average preterm birth rate

in the United States is 10 percent and it breaks out by race and ethnicity roughly like this: Asian and Pacific Island women, 8.6 percent; white women, 9 percent; Hispanic/Latina women, 9.7 percent; Native American women, 10.8 percent; and black women, 14 percent. (These categories are blunt: people of Asian and Pacific Island descent, for instance, are hardly a monolith, but this is what we have for national data.) The disparity is even more dire when you focus on very premature babies or those born before 32 weeks, who are at highest risk for death and serious health problems. Black women are almost three times more likely than white women to give birth before 32 weeks.

The stark consequence of this is that black children are more than twice as likely to die before they turn one than white children, mainly because of prematurity. Here and throughout this chapter, I am comparing black people to white people *not* because white people represent some sort of default or baseline but because these comparisons can help illuminate a problem.

When I mention this disparity to people who are just learning about it, the first thing they often guess is that it might be because black women are more likely to be low income. It is true that income inequality disproportionately harms black communities—and that fact flows from racial discrimination, too. And it is true that being low income is *also* an independent risk factor for preterm birth for women of all races and ethnicities. But for black women, even after you control for socioeconomic status and education level, the higher rate persists.

A healthy, nonsmoking, affluent black attorney in her early thirties living in a fancy apartment in New York City within a stone's throw of great hospitals is at least 50 percent more likely to give birth early than her identically healthy, identically affluent white

neighbor down the hall. Put another way, black women who get prenatal care starting in their first trimester are at higher risk of preterm birth and other complications than white women who do not get any prenatal care at all. Black women with master's degrees are at higher risk than white women who did not graduate from high school. In other words, for nonblack women, gaining the advantages that one would expect to be good for birth outcomes are, indeed, good for birth outcomes. Gaining those same advantages doesn't help black women nearly as much.

So this disparity is actually not driven by income, education, or access to health care. Research has shown that it is also not driven by behavioral factors like alcohol or tobacco use. So, could there be something fundamentally different about black women genetically that makes it more likely they will give birth early?

For years, despite mounting evidence to the contrary, this idea has been embraced by some researchers and clinicians. There is a sizable investment in the idea that race represents somehow an inherent and independent risk factor for preterm birth in and of itself. Hence the existential self-blame that Crear-Perry felt when her son was born: *"I thought it was my blackness."* That's what she had been taught in medical school. But this idea is deeply flawed: People who are perceived as black do not necessarily have similar genetic makeups or innate health profiles. What we call race has social, political, and cultural importance, but it is not a meaningful genetic category.

Genetic and biological differences do not naturally fall along skin color lines. The genome is 99 percent the same in all humans. And the small amount of variation within it does not neatly correspond to "racial" groups as defined by skin color and other physical features. In other words, any two black women will be as different

from each other genetically as they are from any one white woman, and vice versa.

This means that skin color cannot be used as a proxy for understanding someone's genetic vulnerabilities or general health profile. There is no such thing as a disease that neatly corresponds to skin color. What about something like sickle cell anemia? It turns out that people who get sickle cell anemia have two copies of a gene that evolved in areas where, historically, mosquitoes carried malaria. (The sickle cell anemia gene confers protection against malaria.) That means that people with ancestors from certain parts of Africa are more likely to have sickle cell anemia, but so are people from places like South Asia, the Middle East, Greece, Italy, and parts of Central and South America. It is not simply related to being what we call "black" or "African American"; it is much broader and more complicated than that.

New research suggests there is genetic contribution to preterm birth—but the important distinction is that there is no evidence that it explains the racial disparity, and no reason to think that genetics will ever explain why black American women suffer early birth more often than others.

There's one kind of research on this issue that is particularly illuminating, and devastating. These are studies that compare preterm birth and low birth weight rates between American-born black women and foreign-born black women who emigrate to America from countries in Africa or the Caribbean. This kind of investigation was pioneered by Chicago neonatologists Dr. James Collins and Dr. Richard David, starting in the 1990s. There have been several published over the years, looking at different populations.

These studies have all overwhelmingly demonstrated the same thing: White American women and black immigrant women have

very similar rates of preterm birth and low birth weight. Black women born in America—including the immigrants' own daughters—are the ones who experience the higher rate of low birth weight and prematurity.

Collins, who is a professor of pediatrics at Northwestern University, wrote in 1997: "Regardless of socioeconomic status, the infants of black women born in Africa weighed more than the infants of comparable black women born in the United States." This is despite the fact that American black women tend to have more mixed ancestry than African black women, so if genetics were really at play here—if African ancestry were the source of the problem—you would expect exactly the opposite of what this research shows.

These studies strongly suggest that the source of the risk is not anything innate; it is experience in the United States. This research says something unbearably sad about the promise and hope of this country versus the reality of it. Immigrants come to America in the hope that their children will have a better life—but the daughters of black immigrants have, on average, worse birth outcomes than their own mothers. By contrast, on average, the daughters of white immigrants to America have bigger, healthier babies than their mothers.

"I think Dr. Collins's research has pretty conclusively proven that the issue is what those babies and their families experience throughout their lifetime *as a consequence of being in America*," said Dr. Arthur James, an obstetrician-gynecologist at Ohio State University. "It is the impact of that differential treatment for those of us of color that has a detrimental impact on our physiology and places us at increased risk for preterm birth and infant mortality."

The exact biological pathways by which exposure to discrimination manifests in early birth are complex and still not fully

understood. We do know that a high allostatic load—that stress hormone reaction—is central to the way that chronic stresses, like exposure to racism, harms the body. In 1992, public health professor and researcher Dr. Arline Geronimus coined the term "weathering." Weathering is essentially the idea that cumulative stress on your body over time causes health problems. This happens to everyone with age. We all wear out. Generally, the bodily burden of pregnancy is not as easily carried the older we get. But Geronimus hypothesized that black women experience negative pregnancy outcomes at much younger ages than nonblack women because their bodies have weathered faster as a result of being exposed to more stressors. This follows to a sadly logical conclusion: Black women also have shorter average life expectancy than white women.

Perhaps some of the initial skepticism that this information meets has to do with the fact that, especially for people who don't experience it, racism seems conceptual and nebulous, difficult to measure. But there are ways to look at the effects of racism in a scientifically rigorous way. The effects of racism are real and measurable and actually quite consistent in scientific literature. You can ask large groups of women about their experiences of racial discrimination and then chart their birth outcomes and see the strong and lasting correlation between that discrimination and premature birth. You can measure certain stress hormone levels and notice that black women with higher levels of this hormone are more likely to give birth prematurely. You can, as Collins has, compare red-lined neighborhoods in Chicago against a map of high rates of preterm birth and see that they are, in preliminary data, tightly associated with each other. Zip codes that have more racial and economic segregation—a marker for structural racism—have higher rates of premature birth for black women.

The University of California, San Francisco, in particular, is doing groundbreaking work on this topic. A recent study led by Dr. Brittany D. Chambers and Dr. Monica McLemore found that three-quarters of pregnant black women regularly experienced racism in their daily lives, such as at school, at work, at a store, or on the street. Chambers is now working on SOLARS, a study that aims to be the largest ever to focus solely on black and Latina/x pregnant women: The research tracks self-reported experiences of racism and other chronic stressors like adverse childhood events, alongside stress hormone levels and other biomarkers in blood, urine, and saliva.

Crear-Perry has come to understand her own preterm birth very differently over the past two decades. Now an obstetrician-gynecologist and the president of the National Birth Equity Collaborative, an advocacy group, she is a leading voice arguing that researchers and health care providers should not cite "black race" as a risk factor for preterm birth. Instead they should specify that "exposure to racism" is the problem. She can draw the lines directly between cause and effect in her own life.

Crear-Perry, a youthful, apple-cheeked woman with long braids and relentless energy, grew up in Grambling, Louisiana, a majority-black town that is home to Grambling State University. Her mother is a pharmacist and her father an ophthalmologist; she remembers her childhood as sheltered and happy, surrounded by highly educated families who worked in academia or medicine. In 1989 she went to Princeton, where she remembers being called "colored" for the first time but also where she joined a supportive, tight-knit black sorority, ran track, and excelled academically. In her last year of college, she gave birth to her daughter (past her due date) and married her boyfriend, a police officer. She got into medical school

at Louisiana State University Shreveport. Things were going according to plan.

But something happened in medical school: Racism was pervasive. She had experienced discrimination previously, of course, but never like this: constant, virulent, frightening. She started to be afraid in a new way. She worried that she would not succeed not because she couldn't do the work but because some of the residents on her hospital rotations responsible for her evaluations clearly did not feel comfortable with a high-achieving, Princeton-educated black woman.

This took many forms. Some incidents made her fear for her safety, such as when a white classmate writing up the shared lecture notes drew pictures of black people swinging from trees like monkeys and strapped into electric chairs. And there were other, more common occurrences that made her fear for her professional future: She was often assumed to be a tech or an aide, not a doctor in training. She had lost that sense of freedom she felt in the community of her childhood, the agency she'd felt at Princeton, and was keenly aware that her future might rise or fall based on someone's false idea of her. There was also the fact that the LSU medical center, now called University Health, was called Confederate Memorial Medical Center until 1978.

"There are not many people who look like me who finished med school," Crear-Perry told me. "And so they were not accustomed to seeing me there. You can't sound too angry, too smart, too— You know, you have to fit in all the little boxes and make them feel okay. Which is nerve-racking. Every day. That's a scary place to live."

Crear-Perry draws a direct line between that constant fear and what happened next—a direct line between her first pregnancy, during which she felt safe, and her second pregnancy, during which

she felt that she was in danger. In early June 1996 she was not even showing yet. When she started having abdominal pain, her first thought was that it was probably nothing. Ligament pain, Braxton-Hicks contractions, all those reassuringly normal things. She drove her four-year-old daughter to swim class and found that she couldn't get out of the car. She asked another parent to walk her daughter into class and drove herself to the doctor. She started vomiting and realized that this might be something to worry about after all. When they checked her at the hospital, she was already dilated and having strong, regular contractions. There was nothing anyone could do to stop her labor; the baby was coming that day.

In Crear-Perry's mind, she was miscarrying. The baby would be too immature to live. It was almost unheard-of for a 22-week baby to survive at any hospital anywhere at that time.

Meanwhile, her husband didn't have all the medical context that she did. He heard the doctor asking if they should intubate the baby at birth. He wanted everything done. Crear-Perry thought her son was going to die no matter what, and she wanted her husband to feel like they had tried their best. So the couple agreed to intubate.

Her son was born just a few hours later; amazingly, he cried briefly before doctors inserted the breathing tube. "I was, like, 'Look at him!'" Crear-Perry said, remembering that first surge of pride. But she was still sure he would die. And if he didn't, she worried about what his life would be like.

Incredibly, against impossibly long odds, her son, Carlos Jr., survived and came home after more than four months in the NICU. Nothing has been easy, for him or for his parents. Crear-Perry told me about the physical therapy, occupational therapy, feeding challenges, and the like that they have been through over the years. Her son has some developmental disabilities and hearing loss. These

were her hopes for him: "I prayed: 'God, he might not be able to do all the cool things, but I want him to love and be loved.'" Now, she says, he does and he is.

Crear-Perry no longer blames herself, her skin color, for her son's early birth; she blames the environment she lived in, which made her feel fearful and powerless. She advocates a human rights approach to reproductive care. "In the genetics camp, they think it's simpler to look for a gene, because racism is too hard. To me, it's simpler to value everyone." This is not a matter of semantics. "It inspires a change in other people and not just telling black folks what *they* should do differently, which is a big pivot," she said.

Slowly, this distinction is gaining traction, especially in some circles of researchers and in the media. But it is quite far from widely accepted and disseminated; the idea that skin color is the source of the risk is still dominant.

But the research is clear: Experiencing discrimination is bad for your health. Racist systems are bad for the health of the nation. We are dynamic, porous organisms. We are made of our mothers and fathers, but also the food we eat, the air we breathe. We are all shaped—both psychologically and physiologically—by our environments. Our cumulative life experience becomes embodied in us. This is true of everyone, but it has meaning and consequences that can be specific to black women. In speaking to black women who have had a preterm birth, asking them about racial discrimination, I was struck by how many of them used metaphors like "the air I breathe" or "the water I swim in" to describe the pervasiveness of the experience.

Another facet of this problem is that pregnancy necessitates interaction with health care systems, and black women tend to experience discriminatory health care even in the best hospitals. That

includes rougher handling during cervical exams, unanswered questions, and untreated symptoms. (Think of Serena Williams and the oft-told story of how she almost died after her C-section because her doctors didn't believe her when she said she had a blood clotting condition.) Research has shown that doctors tend to undertreat and underestimate both women's symptoms and black people's symptoms. For black women, that's double jeopardy.

In November 2017, I went to San Francisco for a three-day research symposium put on by UCSF's Preterm Birth Initiative (PTBI). The conference was called "Racism and Preterm Birth," a purposefully jarring title. The information presented at the symposium was devastating. I often found myself swallowing back tears, particularly listening to a presentation by the PTBI Community Advisory Board members, a group of women of color who have had premature births and who advise the UCSF researchers on the lived reality of the phenomenon.

Hope Williams is a special education assistant teacher and member of the Community Advisory Board. We met one evening on Treasure Island, a quiet hamlet in the San Francisco Bay populated by apartment buildings and old navy barracks. Hope looked younger than her thirty-eight years, except at certain moments, when a curtain of exhaustion descended over her face. We sat at a picnic table watching the sun set over the glittering San Francisco skyline and talked about the birth of Williams's little girl.

About nine years before Williams got pregnant with her second child, she discovered that she had high blood pressure. To get it under control, she lost weight, changed her diet, and started exercising more. She also started seeing a physician regularly, a doctor who was caring and attentive and who put her on a particular blood pressure medication for a short period of time. By the time Williams started

planning to get pregnant again in 2014, she felt confident that she was in good health.

But, as is often the case for women who have had high blood pressure in the past, during pregnancy Williams's blood pressure rose again. She knew this was not ideal, but no one explained to her that this put her at risk of a preterm birth and that it put her own life at risk. She kept going back and forth to the hospital so that they could get her blood pressure down, only for it to rise again. (She had had to change insurance plans, and the physician who had been so helpful before was no longer in network.) She knew that the certain medication that she took years before had controlled her blood pressure quite well, but when she mentioned it multiple times, no one listened, instead giving her other medications that didn't seem to have any effect on her.

"I didn't understand what was going on," Williams remembered of the end of her pregnancy. She was sick and afraid; she couldn't get anyone to answer her questions but she could tell she was getting worse. "My hands were so swollen, I could barely hold a fork to feed myself," she said. She and her daughter's father had just thrown a baby shower; their friends and family were excited to meet the new baby. Williams wanted to be celebratory, too, but the truth was that she felt terrible and she worried that, despite the doctors' seeming lack of concern, something was really wrong.

About a week later, when she was 34 weeks along, she got up in the morning and felt her water break. So she called her daughter's father to tell him to meet her at the hospital. She put a towel between her legs, packed bags for the hospital. Then she made breakfast for her older daughter, dropped her off at school, and drove to the hospital.

She was in active labor already. "I didn't understand what this

meant for my baby," Williams recalled. "I didn't even know what the NICU was." The birth happened fast, and her daughter came out crying. "I'm, like, 'Just give me my baby.' No. They take her and they rush her out. I'm like, 'Where are you taking my baby?' They didn't tell me. Finally, the nurse is like, 'They took her to the NICU.' I'm like, '*What is the NICU?*'" Williams sent her daughter's father after their baby; she was too sick to go, incapacitated on heavy-duty medications to prevent a stroke, as her blood pressure continued to rise.

Finally, the doctor who had cared for Williams all those years before, who was no longer in her network, heard that Williams was sick and in the hospital. It was her day off, but she came by anyway. She listened to the whole story and reassured Williams that she wasn't going to die. She put her back on the blood pressure medication that had worked before. Within a day Williams's blood pressure was normal.

This story has a happy ending: Both Williams and her baby girl, who is now a spunky preschooler, are healthy. Williams joined PTBI's Community Advisory Board in the hopes that she could help other women avoid what had happened to her. But the fright of her daughter's birth still reverberates for her; she knows now that both her life and her daughter's life were at risk unnecessarily when her blood pressure kept spiking.

To think about what happened to Williams, start upstream: Her experiences with racism throughout her life may have caused her high blood pressure to begin with. The connection is well documented. Throughout her life she was treated differently, dismissively, aggressively, in both work and health care settings. Then, when the problem presented, if someone had just believed her and put her on the drug she knew had worked before, she might not have

gone into preterm labor. At the bare minimum, she should have been informed of her risk of premature birth and told in advance where her baby would be taken after birth. Multiply her story by the hundreds of thousands—not all of them with happy endings—and you get a sense of the scale of this crisis.

These stories are finally getting out. There has been a spate of reporting on the epidemic of black maternal and infant mortality—which are closely entwined—and their direct links to the experience of racism. Around the time of the UCSF symposium, it felt like a dam breaking: The March of Dimes, which is dedicated to preventing preterm birth, started focusing on the racial disparity as the most urgent facet of this problem. The *New York Times Magazine* put black maternal and infant mortality on the cover; NPR's Priska Neely covered it in depth for weeks. Perhaps the volume of scientific evidence—and of human suffering—is finally too great for those in power to ignore: Democratic presidential candidates senators Kamala Harris, Elizabeth Warren, Kirsten Gillibrand, and Cory Booker have proposed various bills and plans that seek to address the issue.

Dr. James Collins, the Northwestern neonatologist who has been doing this research for decades, says he can feel it, too, an increased willingness to at least acknowledge that there are real and measurable health consequences to the experience of racism. "I remember when I first said it, it was very hard to say in a public venue," he said. "It's been a dramatic change. Dramatic."

Prematurity is a lens: It can illuminate. Prematurity is a canary in a coal mine; it can tell us that something isn't right. Prematurity can help us see what might otherwise be hard to understand or accept. Or the research on the connection between racism and prematurity can shed light on our own experience. (For some people,

of course, this news is not news.) I notice a tendency toward activism in my fellow NICU parents—a desire to do anything we can to prevent premature birth from happening to other families. One thing we can do, *especially* those of us who are white, is listen to the people who have been doing this work all along and follow their lead. So I'll follow Crear-Perry: The problem is racism, not race. And it doesn't have to be this way.