

# UNNATURAL CAUSES...is inequality making us sick?

A four-hour series airing on PBS and a national public impact campaign

## Genetics and Race

**Background:** Racial patterns of health and disease have little, if anything, to do with genes. Instead, they reflect patterns of social and economic inequity based on socially constructed ideas about race. To put it another way, race (in a fixed biological sense) doesn't cause illness, *racism* does.

Media stories regularly attribute racial differences in health outcomes to innate or genetic variation between "races." One such example - repeated on *Oprah* not so long ago - is the "salt retention gene" hypothesis that purportedly explains high rates of hypertension among African Americans. The problem is, there's scant evidence to support these claims.

### Here are a few reasons why:

**Race doesn't exist biologically.** Science has shown that humans simply do not come packaged into a few groups. That's because genes are inherited independently and traits vary "non-concordantly." Skin color doesn't cluster with hair texture, blood type, lactose intolerance or genetic markers for disease. In fact, there's not a single gene, trait or characteristic that separates all the members of one so-called race from all members of another.

Moreover, racial categories are socially constructed, not scientifically based. Ancient civilizations like the Greeks didn't sort people by physical appearance but by language and status. Even today, racial classification varies from one country to the next, and in the U.S., our own categories have changed over time. Scientifically speaking, skin color literally is only skin deep.

**Findings on health differences don't support biological notions of race.** Disease patterns can be misleading. Many biologists looking to unravel racial differences in health almost instinctively assume there's an innate or genetic cause. After all, our eyes tell us that people are different, don't they? As anthropologist Alan Goodman reminds us, it's easy - but incorrect - to believe that the sun revolves around the earth.

For example, we know that African Americans suffer the highest hypertension rates of any U.S. population. But Richard Cooper and his colleagues found that hypertension rates in western Africa (the ancestral home of many African Americans) are among the lowest in the world, a third less than for African Americans. Meanwhile, Germans have very high hypertension rates, much higher than both white and Black Americans. If predisposition to hypertension were truly "racial," recent African-origin populations would share similar rates of illness, as would the European-origin populations. But they don't.

Other research bears this out. African American women give birth to a disproportionately high number of low-birth weight babies - weighing on average half a pound less than the babies of white American women. But Richard David and James Collins found that babies born to African immigrants to the U.S. weighed the same as the white babies. David and Collins also discovered something else: the daughters of African immigrants delivered babies weighing an average half pound less than those born to white women and their own

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mothers. As Collins describes it, "Something is driving this that's related to the social milieu that African American women live in throughout their entire life."

To take another example, almost half of all adult Pima Indians in southern Arizona have Type 2 diabetes, perhaps the highest rate in the world. But their Pima brethren living across the border in Mexico have diabetes rates of less than 7% (similar to the U.S. average). Genes that are believed to identify predisposition to diabetes have so far been found in every population where geneticists have looked, not just among the Pima.

Finally, a few years ago the drug Bidil was touted widely as the first "racial" drug when the FDA approved its use for African Americans with congestive heart failure. No one disputes that Bidil can be an effective treatment, but clinical trials didn't test the drug's effectiveness between populations. In fact, evidence suggests that it works for members of all populations, not just African Americans. The drug company even told Wall Street analysts that it's counting on "off label" use with other groups. But by securing FDA approval for African American use only, the drug company, through a twist in U.S. patent law, was able to extend its exclusive right to Bidil by a dozen years. Race, in this case, is simply a convenient marketing tool to be exploited for profit.

Genes can certainly affect disease risk on an individual level. Also, some populations do have different frequencies of particular "alleles," gene variants, like the A, B & O blood groups. But those allele patterns don't neatly divide along 'racial' lines. People from Lithuania and Papua New Guinea, for example, have the same proportions of AB and O blood.

As sociologist Troy Duster sums it up, the impact of race on disease is not biological in *origin* but in *effect*. Searching within the body for the source of population disease differences diverts our attention from addressing the true social, not biological origins lurking outside the body.