

News in focus

US DATA SUGGEST HUMAN BODIES ARE COOLING DOWN

Normal body temperatures are a fraction of a degree colder than they were in the nineteenth century.

By Ewen Callaway

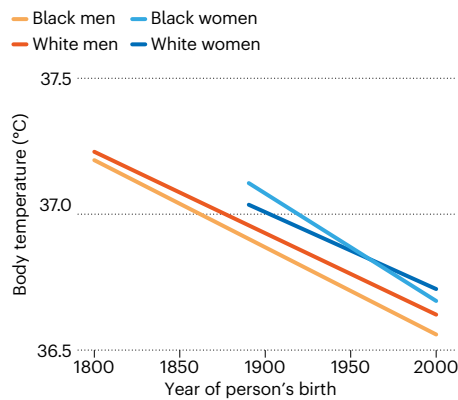
The human body is getting colder. Since the nineteenth century, normal body temperatures have dropped by a fraction of a degree, finds a study¹ that looked at more than 150 years of data.

People's bodies are now, on average, cooler than the textbook figure of 37 °C, having fallen by a few hundredths of a degree per decade, estimates a team led by Julie Parsonnet, an infectious-disease epidemiologist at Stanford University in California (M. Protsiv *et al. eLife* 9, e49555; 2020).

German physician Carl Reinhold August Wunderlich determined the 37 °C figure in 1851. But later research found that the average body temperature is slightly cooler. A 2017 study of some 35,000 people found a

CHILLING EFFECT

Average normal body temperatures have dropped by about 0.03 °C per decade since the nineteenth century, according to a study of hundreds of thousands of temperature measurements taken from people in the United States.



temperature of 36.6 °C (Z. Obermeyer *et al. Br. Med. J.* 359, j5468; 2017). Scientists suspected that measurement error explained the discrepancy.

But Parsonnet says her team's data and modelling suggest bodies really are cooling. The researchers looked at three data sets – 83,900 temperatures taken between 1862 and 1930 from American Civil War veterans, and hundreds of thousands of measurements collected in the 1970s and between 2007 and 2017.

The team found that women born in the first decade of the nineteenth century had temperatures 0.32 °C higher than those of women born in the late 1990s; for men, the difference was 0.59 °C. Overall, temperatures dropped by 0.03 °C per decade (see 'Chilling effect').

Parsonnet thinks that lower rates of long-term infections such as tuberculosis, which can elevate body temperature, explains the trend. In the nineteenth century, chronic infections were common, she says.

That suggestion is "intriguing and plausible", says Jill Waalen, an epidemiologist at the Scripps Research Translational Institute in La Jolla, California. But none of the measurements the researchers used came from the period beginning in the 1940s, when antibiotics were widely introduced. Waalen says that a marked drop in body temperatures at this time would support Parsonnet's infection theory.

SOURCE: ELIFE

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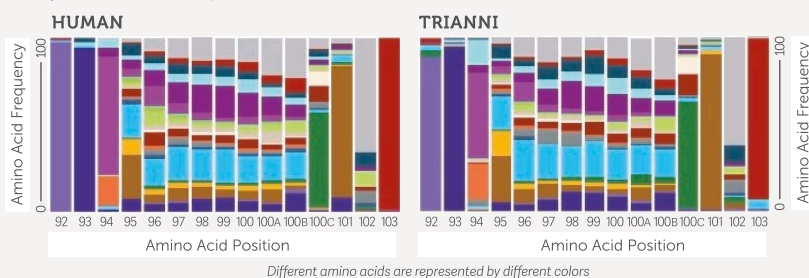
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