

Q&A: How tea may have saved lives in 18th century England

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Drinking tea can have several health benefits. There is seemingly a brew for everything from sleep to inflammation to digestion. In 18th century England, however, drinking tea may have saved a person's life, and it

likely had very little to do with leaves and herbs.

For CU Boulder economics professor Francisca Antman, it's all about the water. Specifically, boiling the water and eliminating bacteria that could cause illnesses like dysentery, more commonly known during the Industrial Revolution as "bloody flux."

It's not a new idea—the connection between boiling water for tea and a decline in deaths across England. A quantitative method of testing it, however, is.

Antman analyzed data from more than 400 parishes around England, looking at [mortality rates](#) before and after tea became popular and affordable throughout the country. The study is [published](#) in the journal *Review of Economics and Statistics*.

She spoke with CU Boulder Today about her research and its modern-day impact on conversations about [clean water](#), health and [human behavior](#).

These data are centuries old. Why look so far back?

The nice thing about this setting is that it occurs before we know the importance of clean water. The evidence suggests that tea became affordable to nearly everyone in England in the late 1780s, during the Industrial Revolution.

Population density is rising, cities are really growing, people are being packed tighter and tighter. That should actually be a period where we see a lot of increasing mortality. But we end up seeing this surprising decline in mortality that can be explained by the introduction of tea and, more specifically, the boiling of water.

How did you analyze so much data?

The analysis compared areas based on water quality, which had to be inferred. That measure of water quality is based on geographical features, such as the number of running [water sources](#) or elevation.

In areas where you expect [water quality](#) should have been inherently worse, you see a bigger decline in mortality when tea comes in. It's not like the water itself is pure or up to the standards of drinking water that we have today. But what you see is those areas that should have benefited more do benefit more as they begin to boil water for tea consumption.

I am so lucky to be able to stand on the shoulders of giants here—the historical demographers Anthony Wrigley and Roger Schofield who collected these data. Very few places in the world have data like this, and it wouldn't have been possible without the monumental efforts of demographers and historians who went through the parish records in England and basically constructed these data series that I then was able to analyze.

What's the modern takeaway here?

I'm a development economist and a labor economist. We know water is important, not just for health but also for people's economic lives and social lives. We know there are still many developing nations where access to clean water, especially for women and girls, is still a struggle.

It can be challenging to identify the causal impact of clean water on people's lives because we already know it's so important, but quantifying that can be difficult.

This research is an example of people changing their behaviors, not because of any outside influence or suggestions about [healthy habits](#) or clean water—but simply because they wanted to drink tea. It is a great example of how a population adopted a healthy behavior without someone trying to change culture or customs from the outside, but because they wanted to adopt the practice from within.

It's something we can look at and possibly try to emulate when considering future interventions aimed at improving health more generally, including with respect to water.

More information: Francisca M. Antman, For Want of a Cup: The Rise of Tea in England and the Impact of Water Quality on Mortality, *Review of Economics and Statistics* (2022). [DOI: 10.1162/rest_a_01158](https://doi.org/10.1162/rest_a_01158)

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