

# Climate change may bring more tainted shellfish to northern seas

August 9 2016, by Randy Dotinga, Healthday Reporter

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Warming oceans may be boosting levels of dangerous bacteria in

northern seas, possibly explaining why more people are getting sickened by tainted seafood and seawater, new research suggests.

"From long-term data, it is apparent that the level of these pathogens is rising in the ocean as a result of [global warming](#)," said study author Luigi Vezzulli. He is an associate professor with the department of earth, environmental and life sciences at the University of Genoa, in Italy.

At the moment, the threat to humans is still considered to be low. But Vezzulli said the germs in question, known as vibrios, pose a threat and must be monitored "in the light of ongoing climate change, especially in coastal areas most heavily affected by ocean warming."

Vibrios are a kind of bacteria that live in many kinds of water, explained Craig Baker-Austin, a senior research scientist with the Center for Environment, Fisheries and Aquaculture Science in the United Kingdom. There are more than 100 species of vibrios, he said, and about a dozen can make people sick with conditions ranging from mild stomach upset to wound infections and blood poisoning. The organisms are found in both the water and in shellfish.

The most infamous type of vibrio causes cholera, a disease that kills an estimated 100,000 to 120,000 people in the world each year and sickens as many as 5 million, the researchers said.

For the new study, scientists examined preserved samples of plankton taken from areas of the North Sea and North Atlantic Ocean from 1958 to 2011. The researchers used a measurement called a "relative abundance index" to track how levels of the bacteria compared to each other over time.

The scientists found that the levels of the germs went up along with the temperature of the sea. This isn't proof that [ocean warming](#) from [climate](#)

[change](#) directly boosted the levels of the germs, Vezzulli said, but it's "strong evidence" that there's a link.

The rising levels of the germs could help explain why Northern Europe has seen more [vibrio](#) infections in recent years among people who swam and bathed in coastal waters, especially during [heat waves](#), the study authors noted. And, heat waves will probably become more common as the earth becomes warmer, they added.

Still, these bacteria "are a rare cause of infection," Baker-Austin said. "But if you have serious underlying risk conditions—such as diabetes, HIV and liver conditions including hepatitis and cirrhosis—it is advisable to avoid consuming raw and undercooked seafood."

If you go to the beach, "try and avoid exposing a cut, burn or abrasion to seawater, especially if you have these types of conditions," he said. "Most serious cases that we see tend to involve people with these types of underlying issues."

What should be done next?

Vezzulli said it's important to monitor disease caused by the [germs](#), especially in parts of Europe where doctors don't have to report certain infections caused by vibrios even though they've been fatal. And in the big picture, he said, it's crucial to combat global warming.

The study was published online Aug. 8 in the *Proceedings of the National Academy of Sciences*.

**More information:** Luigi Vezzulli et al. Climate influence on and associated human diseases during the past half-century in the coastal North Atlantic, *Proceedings of the National Academy of Sciences* (2016). [DOI: 10.1073/pnas.1609157113](https://doi.org/10.1073/pnas.1609157113)

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Citation: Climate change may bring more tainted shellfish to northern seas (2016, August 9)  
retrieved 18 April 2024 from  
<https://phys.org/news/2016-08-climate-tainted-shellfish-northern-seas.html>

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