

Oysters harbor, transmit human norovirus: Avoid raw ones

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Oysters not only transmit human norovirus; they also serve as a major reservoir for these pathogens, according to research published August 28 in *Applied and Environmental Microbiology*, a journal of the American Society for Microbiology. "More than 80 percent of human norovirus genotypes were detected in oyster samples or oyster-related outbreaks," said corresponding author Yongjie Wang, PhD.

"The results highlight oysters' important role in the persistence of norovirus in the environment, and its transmission to humans, and they demonstrate the need for surveillance of human norovirus in oyster samples," said Wang, who is Professor in the College of Food Science and Technology, Shanghai Ocean University, Shanghai, China.

In the study, the investigators downloaded all oyster-related norovirus sequences deposited during 1983-2014 into the National Center for Biotechnology's GenBank database, and into the Noronet outbreak database. They conducted genotyping and phylogenetic analyses, and mapped the norovirus's genetic diversity and geographic distribution over time.

In earlier research, the investigators found that 90 percent of human norovirus sequences in China came from coastal regions. The current research showed that the same is true all over the world, except in tropical regions, from which sequences are absent.

Oysters's status as reservoirs and vectors for human norovirus

transmission is likely abetted by their presence in coastal waters, which are frequently contaminated by human waste, said Wang. Previous research suggests that noroviruses can persist for weeks in oyster tissues, and commercial depuration fails to expunge them.

Norovirus causes stomach pain, diarrhea, nausea, and vomiting. It is extremely contagious, and infects more than 6 percent of the US population, annually, resulting in around 20 million cases, including 56,000-71,000 hospitalizations and 570-800 deaths, according to the Centers for Disease Control and Prevention. Even touching a contaminated surface can result in infection.

Wang advised that people who eat oysters and other shellfish should eat them fully cooked, and never raw. He also urged development of a reliable method for detecting noroviruses in oysters, and a worldwide [oyster](#)-related norovirus outbreak surveillance network.

Provided by American Society for Microbiology

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