



Avoiding Norovirus at the Lake

By the Water Quality & Health Council

Norovirus, the notorious “stomach bug,” can spread like wildfire through homes, schools, healthcare facilities and cruise ships. According to a [recent report](#) by the US Centers for Disease Control and Prevention (CDC), the virus also can be spread among swimmers in natural water bodies. In July, 2014, 70 people became ill with norovirus after swimming in Oregon’s Blue Lake, on the outskirts of Portland. More than half of these were children between four and ten years old. A CDC investigation found those who swam in the lake over the course of one weekend were more than twice as likely to develop vomiting or diarrhea as those who visited the lake but did not go in the water. The outbreak was the subject of public communication during CDC’s 2015 Healthy and Safe Swimming Week¹.



Anatomy of an Aqueous Outbreak

Last summer’s norovirus outbreak in Oregon probably started after a sick swimmer had diarrhea or vomited in the lake, dispersing numerous norovirus particles into the water. Other swimmers then inadvertently swallowed water contaminated with norovirus. Unlike treated recreational water venues such as pools and water parks, natural waters do not contain disinfectants that can destroy norovirus and other pathogens. Even in properly treated venues, however, disinfectants take time to work, so one should never assume pool water is completely germ-free.

Norovirus is the second-leading cause of waterborne illness outbreaks in untreated recreational waters. The leading cause is the bacterium Shigella.

Blue Lake was closed to swimmers for ten days to prevent further norovirus cases, but [CDC noted](#) its investigation highlighted a need for guidance for public officials to help them determine when to reopen recreational water venues following outbreaks. We agree this should be a priority, especially given the fact, as CDC notes, that there is evidence norovirus can survive in water for several months, and even years.

¹ Formerly known as “Recreational Water Illness and Injury Prevention Week,” this year the annual observance occurred May 18-24, 2015.

Healthy and Safe Swimming

The CDC report also noted a need for communication tools to inform the public about the risks associated with swimming in untreated recreational water venues, including the ocean, lakes, ponds and rivers. Many of the same tips for avoiding waterborne illness in treated venues, such as swimming pools, apply to lakes and ponds, including:

- Don't swim if you have diarrhea or have been vomiting.
- Don't urinate or defecate in the water.
- Don't swallow lake water.
- Take children on frequent bathroom breaks.
- Check diapers, and change them in a bathroom or diaper-changing area—to keep germs away from the water.

We submit the following additional tips for healthy swimming in untreated recreational water venues:

- Do not swim in waters posted as “no swimming” zones.
- Avoid swimming after a heavy rain to avoid exposure to sewage from overflowing sewage treatment systems or contaminated runoff.
- Limit the amount of water going up your nose to reduce your chance of contracting a rare but deadly *Naegleria fowleri* amoeba infection. These infections have been documented in people who swim or dive in warm fresh water venues.
- Check with local health or environmental officials if you are unsure about swimming in a natural body of water.
- Shower after swimming.

For more information on swimming in natural water bodies, see the CDC website, Oceans, Lakes & Rivers and the linked US Environmental Protection Agency's brochure, "Before You Go to the Beach" at:

<http://www.cdc.gov/healthywater/swimming/oceans/>.