

# Is Waterborne Disease Still an Issue in the US?

*This program is presented by the Centers for Disease Control and Prevention.*

In 1908, the first US drinking water plant implemented chlorination to protect community health, leading to a dramatic decrease in waterborne disease. Clearly, drinking water treatment is one of the great public health achievements of the twentieth century.

Welcome to CDC Audio Rounds. I'm Dr. Michael Beach from the Centers for Disease Control and Prevention.

Despite these improvements, waterborne disease in the US is still part of everyday life. There are four critical areas: drinking water, recreational water, the built environment, and climate change.

**First, drinking water.** Almost 16 million households use private wells, which are not covered by government regulation. Many people don't know they should have their well water tested annually.

*Clinicians should consider a patient's water source as part of their evaluation, particularly in rural areas where agricultural and animal runoff may impact water quality.*

**Second is recreational water use.** Americans make hundreds of millions of swimming visits each year to oceans, lakes, and swimming pools. The increased number of outbreaks reported find the major culprit is the extremely chlorine tolerant parasite *Cryptosporidium*.

*Clinicians should advise patients not to swallow recreational water and to refrain from swimming when they have diarrhea. If diagnosed with cryptosporidiosis, wait two weeks after cessation of symptoms before getting back in the water.*

**Third, let's talk about the built environment.** We've created buildings and homes that are associated with miles of pipes and warm water - ideal growth environments for biofilms, the scum layer in pipes known to harbor pathogens. Waterborne disease transmission now also includes direct contact and inhalation of aerosols created by shower heads and hot water taps.

*Clinicians should be aware that advanced age, immunocompromising conditions, underlying lung disease, and a history of smoking increase risk for infection with Legionella and other respiratory pathogens commonly found in building water systems.*

**And finally, climate change.** Water temperatures around the globe have been gradually climbing. *Naegleria fowleri* is a climate-sensitive, warm water-loving amoeba found in freshwater lakes, usually in southern-tier states. It migrates up the nose to the brain and causes primary amoebic meningoencephalitis, a rare but almost universally fatal disease. Over the past several years, we've seen *Naegleria's* geographic range expanding northward. CDC also just published an investigation showing, for the first time, that *Naegleria fowleri* was found in residential tap water. It caused the death of two people in Louisiana who were regular users of neti pots for sinus irrigation.

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*All patients should understand that tap water from any source is not sterile. As a result, clinicians should recommend that people using nasal irrigation devices reconstitute solutions using boiled, distilled, or sterile water.*

Integrating an understanding of waterborne disease into everyday clinical histories, lab requests, and anticipatory guidance for patients can help you better diagnose waterborne disease and educate your patients about simple disease prevention measures. Thank you.

*For the most accurate health information, visit [www.cdc.gov](http://www.cdc.gov) or call 1-800-CDC-INFO.*