

Using tap water for your nasal rinse? Beware amoeba dangers

March 13 2024, by Ernie Mundell



Folks with sinus issues often turn to neti pots or "nasal rinsing" to help clear their clogged passages.

Unfortunately, too many don't follow standard advice to avoid using tap water, and that's leading to sometimes fatal amoebic infections, a new report finds.

"A recent study showed that nearly two-thirds of U.S. adults think tap water is safe for nasal rinsing," wrote a team led by Julia Halston of the U.S. Centers for Disease Control and Prevention.

But tap water often comes from rivers and lakes that can carry dangerous amoebas such as *Acanthamoeba*, which "can cause a variety of severe human infections," Halston's group warned.

These include a potentially fatal form of encephalitis called granulomatous amoebic encephalitis (GAE), which attacks the central nervous system.

Various skin diseases, rhinosinusitis, pulmonary (lung) disease, and osteomyelitis ([bone infections](#)) have also been linked to waterborne amoebic infection.

The immunocompromised are at highest risk for *Acanthamoeba* infections — people such as those with diabetes, [cancer patients](#) on chemotherapy, people living with HIV and recipients of organ transplants.

The researchers stressed that while very rare, non-skin *Acanthamoeba* infections are deadly: 82% of people with the illness will die.

In the new report, the CDC team reviewed 10 known cases of *Acanthamoeba* infections contracted via nasal rinsing between 1994 and 2022 (with nine of those cases occurring over the past decade).

All of the patients had compromised immune systems (most commonly

cancer-related), and averaged 60 years of age. In nine patients, the infection affected their sinuses, but six also had brain infections. Six had infections of the skin and three experienced bone disease from their *Acanthamoeba* infection. Many were infected at multiple body sites.

At least half of the patients said they'd used tap water while rinsing their nasal passages, and the water source for the other five patients was unknown. Most had been using nasal rinses regularly for months or years.

"Three patients with confirmed or suspected GAE died and three survived," Halston's group said.

The findings were published March 13 in the CDC journal [*Emerging Infectious Diseases*](#).

Based on these findings, the CDC team is stressing once more that nasal rinses always be performed with [sterile water](#), not unboiled tap water.

Amoeba "could theoretically be introduced during any rinsing encounter, but the risk for infection likely increases over time with continued exposure," they noted.

Unfortunately, misinformation about tap water persists.

Even though *Acanthamoeba* and other amoeba species have been detected in more than half of U.S. tap water samples, "a recent study reported that 33% of US adults believe that tap water is sterile, and 62% believe it to be safe for rinsing sinuses," Halston and her colleagues noted.

That misinformation could lead to tragedy, so "educating against the use of unboiled [tap water](#) for nasal rinsing may be effective in preventing

invasive *Acanthamoeba* infections," they said.

More information: Acanthamoeba infection and nasal rinsing, United States, 1994–2022. *Emerg Infect Dis.* 2024 Apr, doi.org/10.3201/eid3004.231076

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