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Diarrhea and Swimming Still Don't Mix

Editor's Note: The National Environmental Health Association strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we periodically feature columns on environmental health from the Centers for Disease Control and Prevention (CDC) in the *Journal*.

In these columns, authors from CDC's Water, Food, and Environmental Health Services Branch, as well as guest authors, will share tools, resources, and guidance for environmental health practitioners. The conclusions in this column are those of the author(s) and do not necessarily represent the views of CDC.

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Healthy and Safe Swimming Week is May 18–24, 2026. This year's theme is: Don't Let Diarrhea Sink the Fun This Summer. Environmental health practitioners are ideally positioned to promote healthy, safe swimming practices through their relationships with the aquatic community.

Diarrhea is one of the most common swimming-related illnesses, along with skin rashes, swimmer's ear, pneumonia or flu-like illness, and irritation of the eyes or respiratory tract. People can get swimming-related illnesses if they swallow, come into contact with, or inhale mists of water contaminated with germs. They can also get sick from contact with chemicals while swimming when water chemistry is out of balance, or by inhaling chemicals that evaporate from the water and become gases in the air.

Diarrhea is the most common cause of swimming-related outbreaks. Over 200 disease outbreaks linked to pools, hot tubs, and splash pads occurred during 2015–2019, and *Cryptosporidium* was the leading cause (Hlavsa et

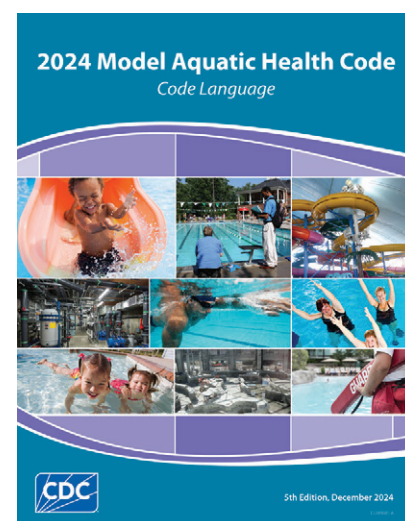
al., 2021). People who are sick with diarrhea can spread germs to others if they have a fecal incident in the water. If others swallow contaminated water, they can become infected. Pool disinfectant chemicals inactivate or kill most germs in properly treated water within minutes. However, *Cryptosporidium* can survive for more than 7 days at typical pool disinfectant levels and can cause watery diarrhea lasting days to weeks.

Pool Codes as a Prevention Tool

The Model Aquatic Health Code (MAHC) provides guidance to prevent injury and illness associated with public aquatic venues—such as pools, hot tubs, and splash pads. This guidance from the Centers for Disease Control and Prevention (CDC) brings together the latest science and best practices to help jurisdictions save time and resources when developing and updating pool codes. Pool codes regulate how aquatic venues are designed, constructed, operated, and managed.

FIGURE 1

The 5th Edition of the 2024 Model Aquatic Health Code From the Centers for Disease Control and Prevention



The MAHC includes language to help reduce the public health impact of *Cryptosporidium* contamination by providing pool operators with procedures for killing the parasite using secondary or supplemental (e.g., UV, ozone) disinfection and hyper-chlorination after diarrheal fecal incidents. The MAHC recommends secondary disinfection systems for increased-risk aquatic venues. Such venues have a higher likelihood of impacting health from microbial contamination. Examples of venues include spray pads, wading pools, and other aquatic facilities designed for children <5 years, as well as therapy pools. The latest edition of the MAHC is available at www.cdc.gov/mahc

TABLE 1

Disinfection Steps in Response to Fecal Contamination in Pools

Incident Type	Chlorine Stabilizers Present	Before Disinfecting	Free Chlorine Level	Contact time
Formed stool	No	Physically remove stool	2.0 ppm (mg/L)	25 min
Formed stool	Yes	Physically remove stool	2.0 ppm (mg/L)	50 min
Diarrheal stool	No	N/A	20 ppm (mg/L)	12.75 hr
Diarrheal stool	Yes *	Lower CYA to <15 ppm (mg/L) by draining and refilling	20 ppm (mg/L)	28 hr
Diarrheal stool	Yes *	Lower CYA to <15 ppm (mg/L) by draining and refilling	30 ppm (mg/L)	18 hr

* Refer to Table 6.5.3.2.1 in the current edition of the Model Aquatic Health Code (MAHC) for additional diarrheal stool incident inactivation times for pools with chlorine stabilizers present.

Note. CYA = cyanuric acid; N/A = not applicable.

(Figure 1) (Centers for Disease Control and Prevention [CDC], 2025).

What To Do When There Is Poop in the Pool: Response Guidance

Most importantly, swimmers should stay out of the water if they are sick with diarrhea. Swimmers should not return to the water until 2 weeks after diarrhea has completely stopped.

Diarrheal incidents should be treated as potential *Cryptosporidium* contamination events and need to be responded to immediately by aquatic staff. Compared to diarrhea, germs in formed poop are less likely to be released into the water because they are mostly contained within the formed poop. Formed poop also protects germs inside from the chlorine in the water, so immediate removal is still necessary.

If a pool contains chlorine stabilizers, the inactivation time increases significantly (hours) for diarrheal stool incidents and doubles for formed stool incidents. Chlorine stabilizers are added to a pool to prevent chlorine from breaking down rapidly under UV light from the sun. The MAHC outlines response and disinfection steps for diarrhea and formed stool incidents (Table 1) (CDC, 2025). Another option for responding to a diarrheal stool incident is to circulate water through a secondary disinfection system (e.g., UV, ozone). In some situations, such as lower-volume aquatic venues, it might be easier to drain the venue completely.

What You Can Do To Keep Pools Safe

This year's Healthy and Safe Swimming Week is a reminder that diarrhea and swimming still do not mix (Figure 2). Vigilance is needed among aquatics staff, including lifeguards, to prevent and promptly respond to diarrheal stool contamination incidents. Environmental health practitioners can amplify healthy and safe swimming messaging within the communities they serve. 🌸

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- Hlavsa, M.C., Aluko, S.K., Miller, A.D., Person, J., Gerdes, M.E., Lee, S., Laco, J.P., Hannapel, E.J., & Hill, V.R. (2021). Outbreaks associated with treated recreational water—United States, 2015–2019. *Morbidity and Mortality Weekly Reports*, 70(20), 733–738. <https://doi.org/10.15585/mmwr.mm7020a1>

FIGURE 2

A Healthy Swimming Campaign Poster Discouraging Swimming While Sick With Diarrhea From the Centers for Disease Control and Prevention



Explore These Resources From the Centers for Disease Control and Prevention

- Aquatics Professionals Toolkit: www.cdc.gov/healthy-swimming/toolkit/index.html
- Healthy and Safe Swimming Week Campaign: www.cdc.gov/healthy-swimming/campaign-hssw/index.html
- Healthy and Safe Swimming Week Communications Toolkit: www.cdc.gov/healthy-swimming/campaign-hssw/communications-toolkit.html
- Healthy Swimming Communication Resources: www.cdc.gov/healthy-swimming/communication-resources/index.html
- About the Model Aquatic Health Code (MAHC): www.cdc.gov/mahc
- MAHC Tools and Training: www.cdc.gov/model-aquatic-health-code/php/training/index.html
- Pool Inspection Toolkit: www.cdc.gov/healthy-swimming/php/toolkit/index.html