

WELLNESSMONTHLY

Going in the Water? First, Take a Health Pause | August 2019



Whether you're taking a quick dip to cool off, swimming laps or relaxing in a spa, it's important to be health-conscious when going in the water.

Water Wisdom Protects Your Health

Before plunging into water for fun or fitness, it's important to take a moment to evaluate potential health effects.

Water in natural environments (ocean, streams, lakes, waterfalls) and made-made structures such as swimming pools, splash parks and spas/hot tubs may be contaminated – even when it looks clear and clean.

Recreational water illnesses (RWIs) are caused by exposure to bacteria, other organisms and chemicals that may be swallowed, absorbed through the skin, or inhaled as mists, aerosols or gases. RWIs include gastrointestinal complaints; skin rashes; open wound, ear, eye and respiratory infections; and neurologic effects. According to the Centers for Disease Control and Prevention (CDC), the most commonly reported RWI is diarrhea, which can be caused by germs such as [Cryptosporidium \(Crypto\)](#), [Giardia](#), [Shigella](#), [norovirus](#) and [E. coli](#).

Health Precautions

If swimming outdoors, watch for water-quality warning signs. Check the water depth and temperature (cold water can cause hypothermia), the weather forecast (e.g., thunderstorms, high winds), tides and currents. Avoid water that is murky, contains debris or algae, or does not have any movement.

If using a public pool, you can view local inspection reports [online](#) and do your own onsite review. At a healthy pool:

- Water at the bottom of the deep end is clear
- All drain covers are well-secured and undamaged
- Test strips indicate correct pH and free chlorine concentration
- Safety/rescue equipment is available
- There are no chemicals left on the pool deck

To help keep water clean, prevent the spread of disease and avoid infections, public health officials recommend the following:

- Don't swim if you or your children have diarrhea
- Cover open wounds with a waterproof bandage
- Rinse off with fresh water before and after swimming
- Keep dogs, feces, sweat, blood and dirt out of the water
- Don't swallow water, even a small amount



Chemical Treatments

Swimming pool water is typically treated with chlorine and other chemicals to kill viruses and bacteria that can cause illness and help control algae growth. There should be a proper balance in the water's pH level and concentrations of chlorine.

Free chlorine concentration and pH should be frequently checked. A pH value is measured on a 1-to-14 scale, with 1 most acidic and 14 most alkaline. The CDC recommends pH of 7.2-7.8 and a free available chlorine concentration of at least 1 part per million (ppm) in pools and at least 3 ppm in spas/hot tubs.

With the [correct pH and disinfectant levels](#), chlorine will kill most germs that cause RWIs in less than an hour. However, chlorine takes longer to kill some germs, such as Crypto, which can survive for days even in a properly disinfected pool. The pool cleaning process involves a chemical reaction (oxidation). As

water becomes contaminated, or chlorine levels fall, oxidation reduction potential (ORP) also declines. Pool cleaning systems have electronic probes or sensors to monitor ORP; a minimum level of 650 mv is recommended.

'Outa' the Pool!

If water in a private pool gets contaminated by feces, the following clean-up steps are recommended:

1. Stop all use and clear the area.
2. Wear disposable gloves.
3. Remove feces using a net or bucket, not a vacuum.
4. Dispose of feces in a sanitary manner.
5. Disinfect the net/bucket.
6. Remove and dispose of gloves.
7. [Wash hands](#) thoroughly with soap and water.
8. Set the free chlorine concentration at 2 parts per million.
9. Maintain pH at 7.5 or less for 30 minutes.
10. Confirm that the filtration system is operating properly.

For diarrhea in public pools, after the pool area is clear of users, the free chlorine concentration should be raised to a high level (hypochlorination) for at least several hours in order to kill Crypto, which is a chlorine-tolerant parasite. This recommendation does not

apply to residential pools because of the risk of exposure to chemicals if they are mishandled. A public pool may reopen after chlorine concentration and pH are within operating ranges allowed by state or local public health authorities.

Did You Know?

The swimming-pool smell you associate with chlorine is actually a compound called trichloramine, which forms when chlorine reacts with urine and sweat, according to LiveScience.com.

Remember to...

- *Carefully follow directions for use and storage of pool chemicals*
- *Wear goggles to reduce the likelihood of eye irritation*
- *Use earplugs and learn how to safely clear water from your ears*
- *Use approved life jackets rather than foam or air-filled toys*
- *Wear sunscreen to prevent sunburn and skin cancer*