

## How to Safely Manage Your Backyard Inflatable Pool

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### *In a nutshell...*

Inflatable backyard swimming pools are proving very popular during the summer of coronavirus (COVID-19). This article provides basic tips for the novice backyard pool manager on maintaining

Has COVID-19 turned you into a part-time backyard pool manager? Inflatable backyard pools are popular this summer as many families are choosing to steer clear of public aquatic venues to avoid contracting the coronavirus. I recently purchased a small inflatable pool for my family and we are enjoying the fun and relief from the heat just steps from our back door. Naturally, we are living together through the pandemic, so there is no need to maintain a social distance in the pool, as we would have to do in the presence of other swimmers in a public venue.

One thing that is very clear is that pools don't take care of themselves. I found several online resources from which I developed the following tips for those of us who are "dipping our toes" into backyard pool management.

### *Tips for the Backyard Pool Manager*

#### **1. Know approximately how many gallons**

**of water your pool holds.** The volume of water in your pool will determine the amount of pool chemical you will add for treatment. [Online tools](#) can help you calculate your pool's volume. Did your pool come with directions for operating a filter or applying a sanitizer? Follow manufacturer's directions. Small inflatable kiddie pools (approximately 3 - 5 feet in diameter) may be used without added treatment and emptied daily after use. The U.S. Centers for Disease Control and Prevention (CDC) offers [helpful guidance](#) on maintaining these.

**2. Choose a pool disinfectant.** Add a pool disinfectant recommended by your pool's manufacturer or ask for guidance at a pool supply store. Many pool disinfectants are chlorine-based and may contain a



*Inflatable pools for the backyard are extremely popular in the summer of COVID-19. View a video on how to help prevent accidental drowning at <http://www.poolsafely.gov/>.*

stabilizer to help prevent sunlight from degrading the product. You may also purchase products to help adjust pool water pH. How do you know how much pool chemical to add to your pool water? Online tools such as this [pool calculator](#) can help you estimate specific chemical amounts based on your pool's volume and recommended levels.

Hint: Regular chlorine bleach can be used to disinfect a kiddie pool, according to an [article in hunker.com](#). The article estimates 2 ounces of bleach is needed for a 150-gallon pool. Always test your water to ensure a chlorine level of 1 – 4 part per million (ppm) chlorine.

**3. Decide on a method to test your pool water.** Backyard pool managers can easily use color test strips to monitor their pool water chemistry. Pool test strips can help you keep tabs on chlorine levels (“total” and “free” chlorine), and pH. Alternatively, you may prefer to use a liquid test kit.<sup>1</sup> As noted above, the pool water free chlorine level should be in the range of 1 – 4 ppm, and pH between 7.2 – 7.8. The “combined chlorine” level is not measured directly, but is calculated by subtracting the measured free chlorine level from the measured total chlorine level (more on combined chlorine in #4 below).



*Pool test strips are a handy tool for monitoring pool chlorine levels and pH*

**4. Make pool chemical adjustments based on your monitoring data.** CDC calls chlorine and pH “[Your Disinfection Team](#)” for protection against recreational water illnesses. These two chemical factors represent the front line of defense against waterborne pathogens that could make your swimmers sick. Free chlorine is chlorine that is available to destroy pathogens in the water. Chlorine is most effective against pathogens when the pool water pH is between 7.2 and 7.8. That range also provides a comfortable environment for swimmers. [CDC recommends](#) checking chlorine levels and pH at least twice per day, and more often when the pool is used heavily.

“Combined chlorine” is chlorine that has combined chemically with substances in the pool, including urine, perspiration, and body oils. Total chlorine is the sum of free chlorine and combined chlorine. Combined chlorine is unavailable to destroy germs, and can impart a chemical odor to pool water that some mistakenly interpret as “too much chlorine” in the water.

**5. Shock your pool periodically.** You can use either a chlorinated product or a non-chlorine shock oxidizer to break down combined chlorine in the water. Shocking the pool can also remove excess bather waste and visible algae. Shocking should be done when combined chlorine levels exceed 0.5 ppm. Shocking raises the pool disinfectant level 10 to 20 times the measured combined chlorine level. Keep your swimmers out of the water until the free chlorine reading drops back to 1 - 4 ppm. You may find it convenient to apply pool shock overnight to allow time for the free chlorine level to decline. Note: You can purchase chlorine dechlorinator (thiosulfate) at pool stores to reduce chlorine levels rapidly. Always follow manufacturer’s directions when shocking your pool.

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<sup>1</sup> Yellow readout “OTO” reagent chlorine “colorimeter” test kits are less accurate than the pink readout “DPD” reagent. (DPD are one of a few test types allowed at regulated public pools and to test drinking water.)

**6. Use your senses to monitor the overall health of your pool.** While it is important to measure and adjust pool chemical readings a few times per day, a few simple sensory tests can help backyard pool managers to gauge the overall health of their pool.

- ✓ **Visual:** Can you see to the floor of the pool? Water clarity is extremely important to help prevent drowning. Cloudy water can conceal a drowning. If your pool water is cloudy, [you might need an algaecide or a water clarifier](#).
- ✓ **Touch:** When you touch the sides of the pool, is the surface clean and not slimy? A slimy surface indicates microbial growth, which could indicate the disinfectant level is too low. Time to test the water.
- ✓ **Smell:** A properly managed pool has no harsh chemical odor. A harsh odor could indicate the presence of trichloramine, an irritating form of combined chlorine. Trichloramine can turn swimmers' eyes red and make their skin itchy. Although some people would say there is "too much chlorine" in a pool [that smells of trichloramine](#), the truth is there may not be enough. Ask your swimmers not to "pee in the pool" and to shower before swimming (or at least rinse off with a garden hose) to help prevent chloramine irritation.
- ✓ **Hear:** The sound of a working filter is good sensory input around the pool. It means the water is being circulated through a cartridge, sand or other filter media that help remove tiny particles from the water that could contribute to cloudiness and potentially unsanitary conditions.
- ✓ **Taste:** There is no reason to taste pool water!

## Use and Store Pool Chemicals Safely

According to a [2019 CDC report](#), pool chemical injuries led to an average of over 4,500 emergency department visits each year between 2008 and 2017. About half of the injuries reported between 2015 and 2017 occurred at a home, and more than one-third involved children or teens. Those are relevant statistics for new backyard pool managers!

This is a basic *but important tip*: Read and take the time to understand pool chemical use and storage directions. For example, when working with pool chemicals, wear personal protective equipment, such as safety goggles, open only one chemical container at a time, and do so in a way that avoids your breathing chemical fumes or dust. Among pool chemical injuries requiring trips to emergency departments in the period 2015-2017, the top diagnosis reported by CDC was “poisoning due to breathing in chemical fumes, vapors, or gases—for example, when opening chlorine containers.”

Use only one dedicated scoop for each chemical product, and store pool chemicals in a cool, dry, secure location, away from children and pets and chemically incompatible products. For example, never store chlorine-based pool sanitizers (e.g., chlorine products) near acidic products (e.g., those used to adjust pool water pH, or even a can of cola, an acidic beverage). If those products were to combine chemically due to a spill or leak, a reaction could occur that generates hazardous chlorine gas.

For more tips on using and storing pool chemicals safely, please see this user-friendly Pool Chemical Safety [video](#).

We hope these tips will be helpful to you as you take on the role of backyard pool manager!

Helpful References:

[How to Treat the Water in an Inflatable Pool \(hunker.com\)](#)

[A Beginner’s Guide to Pool Maintenance \(Swim University\)](#)

[How to Maintain an Inflatable Kiddie Pool \(In the Swim: Blog\)](#)

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[www.waterandhealth.org](http://www.waterandhealth.org)