

## How To Enjoy Your Swimming Pool And Spend Less Time And Money

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### **PAY NOW OR PAY LATER**

Like your automobile and so much else, doing the right things a few minutes each day will make your pool a joy to own, avoid problems and save time and money. Pool care can be reduced to two key elements test and shock. Swimming pools contain water (duh) and water is a very complex substance. It is THE universal solvent, which means most anything likely to come in contact with your pool water will dissolve.

Swimming pool water also needs to maintain certain key characteristics to be attractive and safe for swimming. In many ways keeping a swimming pool in top condition is like hitting a constantly moving target. The water changes almost daily as it absorbs products of the environment and pool owners attempt to maintain a happy medium with chemicals and filtration. Yikes! Fortunately there are ways to put yourself in charge and keep it that way.

### **TEST -THE FIRST BIG ONE**

Given the complex nature of pool water and environmental contaminants the only way to find out about your water is to test regularly. Regularly is a minimum of 4-5 times each week. In the past testing could be tedious and inaccurate due to the type of test kits generally available. For many years the standard test kits were based on liquid reagents added to pool water and a resulting color change indicating the results of the test. Given the inaccuracy of counting reagent drops and the characteristics of the reagents results for the average pool owner were often inaccurate and led to problems.

A giant step forward was made in the late 1980's with the introduction of the pool water test strip by Environmental Test Systems of Elkhart, Indiana. Called Aquachek, these slim plastic strips had three paper pads that were impregnated with a reagent specific to the testing that is most important to keep a pool in good shape free chlorine, pH and total alkalinity. Dipping the strip into the pool water produced a color change that could be compared to a color chart on the test strip container. If the color was in the correct color range for that test everything was good, if not the test let you know which way to go to correct the problem. Now made by a number of companies since the expiration of the ETS patent test strips have made pool water testing quick, easy and accurate. No excuses! You can test your pool in under a minute.

### **TESTING FOR WHAT AND WHY?**

Let's introduce the big three: free chlorine, pH and total alkalinity. Many years of research and practical experience has shown that these three components of pool water have the most influence on water quality. If free chlorine, pH and total alkalinity are in the proper range no swimming pool is likely to have problems with water. Let's discuss each one in some detail.

## **Free Chlorine-who captured it anyway?**

When chlorine is added to pool water in any form, liquid, granular or tablet, it forms hypochlorous acid or free chlorine. Fear not, the concentration is typically well below 10 parts per million. Hypochlorous acid is pretty interesting stuff. It reacts with just about anything organic like all that stuff nature and swimmers put in your pool. Use your imagination and you can believe there is plenty of organic material to work with. When free chlorine reacts with organic junk it "attaches" to it and breaks it up like a fire burning wood. Technically it "oxidizes" the offending material. Burned up by the free chlorine the offending material becomes inoffensive and no problem. The chlorine does not escape unscathed however.

Once chlorine attaches itself to and destroys contaminants it is no longer free chlorine but a chloramine. Chloramines are used up and useless for any further clean up work in a pool. They have to be replaced with more free chlorine. It's clear that knowing the amount of free chlorine in your pool is very important. When you buy a test kit be sure it tests for free chlorine. Liquid test kits using a chemical called DPD and all test strips measure free chlorine.

## **pH - why capitalize the second letter?**

pH is the most important component. pH measures the acidity or alkalinity of water. A low pH is acidic and corrosive, a high pH is alkaline or basic and causes mineral buildup and irritation. Swimming pool water should be kept at a pH of between 7.2 and 7.8. Keep in mind that pH is measured on a logarithmic scale so the difference between a pool water pH of 7.2 and 7.3 is not one-tenth more but 100 times more! The seemingly narrow pH range is not so narrow after all and being "just a bit over or under" is important.

## **The mysterious Total Alkalinity**

Total alkalinity measures the dissolved carbonates in your water. All water has a natural level of these dissolved carbonates and they play an important role in swimming pools. Total alkalinity acts as a buffer to pH. At the proper level alkalinity "locks" pH into a range and keeps it there. Very soft water has low alkalinity and pH tends to bounce around quite a bit. Keeping the alkalinity in the proper range of 80-160 ppm keeps pH in line too.

There it is. Regular testing of your pool water lets you know if the BIG 3, free chlorine, pH and Total Alkalinity are in the proper range so your pool stays clear and inviting. You will also know right away if the water is out of whack and can take action before it goes bad. Testing and adding any necessary chemicals might take as much as fifteen minutes 4-5 times a week. Not too shabby!

## **SHOCK-THE SECOND BIG ONE**

Using your pool is what it's all about. After using your pool determines how soon you might get to use it again.

Up in the testing section we talked about contaminants from nature and swimmers and how chlorine deals with them. After a long afternoon in the pool your free chlorine is completely exhausted. If you don't replace it in a hurry - bad things! Do your own test on your next pool afternoon with family and friends. Once everyone is out and enjoying dinner or perhaps adult beverages stand near the pool. You'll smell "that chlorine smell" good and strong. What your nose is picking up is the smell of chloramines, used up chlorine! Free chlorine in pool water is virtually odorless. A heavy chlorine smell means you're low on chlorine not that you have too much.

Adding more chlorine to your floater or feeder is great but it won't get around the whole pool in time to prevent a potential breakdown. That's where shocking comes in. We pool types differentiate between shocking and superchlorination. Super chlorination raises the level of free chlorine from the normal 1.5-3 ppm to at least 5 ppm. Shocking raises free chlorine to at least 10ppm. Raising the chlorine level in this way ensures that contaminants are completely burned out or oxidized and that enough free chlorine is available to re-establish the normal level of sanitizer in your pool.

When the pool clears out after use just add 1 lb. of shock for every 10,000 gallons of water your pool holds and call it a day. Calcium hypochlorite is the most popular shock. It does the job and quickly breaks down in sunlight so you can swim again. Sodium dichlor products are gaining popularity as are non-chlorine shocks. If you use a non-chlorine shock remember that by itself it's not much good. Non-chlorine shock needs some chlorine in the water to

work.

## **QUICK AND EASY**

Remember the dynamic duo test and shock. If you do these faithfully your pool will reward the your few minutes each day with great looking, inviting water all season long. And it will cost you less! It's a win-win baby!

### **Short note about the author**

*Rob Coxworth is the founder of Webfoot Leisure ([www.webfootleisure.com](http://www.webfootleisure.com)) an internet retailer of swimming pools, supplies, equipment and accessories. Rob has wide experience in the pool industry having positions in senior management, consulting, marketing, sales and operations.*

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