

What Causes a High pH on a Saltwater Pool?



My pH is rising uncontrollably on my saltwater pool.

A high pH on your saltwater pool can be a real problem . . . but it can also be an indicator of other issues with your water chemistry. Just adding more acid will not necessarily take care of the problem.

In this article, we discuss what makes your pH go up in a salt pool and what you need to look at to correct the problem.

The chlorine generation process produces sodium hydroxide (pH increaser)

The process of converting chlorine to salt can best be explained with a chemical equation.



Or to put it in plain English:



When you put water + salt through the energized cell plates, you end up with chlorine (hypochlorous acid) and sodium hydroxide.

Now, here are a couple of explanations you might find helpful:

Hypochlorous acid- this is the active form of chlorine in your pool water that is in every chlorinated pool, whether it be a tablet pool, a salt pool or a bleach pool. Chlorine in its purest form is actually a gas (remember mustard gas?) but when you dissolve it in water, you get hypochlorous acid.

Sodium Hydroxide- this is the byproduct of saltwater chlorine generation. The sodium that was in the salt has to go somewhere, so it combines with hydrogen and oxygen from the water and forms this substance.

Why should I care about sodium hydroxide? Sodium Hydroxide has a very high pH so when you are using a salt system, you will find your pH rising. If you don't manage your salt pool properly, you will create a LOT of sodium hydroxide and your pH will rise seemingly uncontrollably.

What should I do if my pH is rising uncontrollably?

FIRST, check the stabilizer level (cyanuric acid) in your pool water. Some rise in the pH is normal in a salt pool, but an uncontrollable pH rise is a clue that your salt cell may be running way too long and may result in a severely shortened life span.

Your stabilizer level should be 80 - 100 ppm on a salt pool. I know that there is some debate in the industry on this, but here in TX, if you do not keep the stabilizer up high on a salt pool, that chlorine will not stay in the pool.

SECOND, check your run times on your salt system. Your system should be able to maintain your chlorine level on 8 - 10 hours run time in the hottest months of the summer. If you having to run your system 12 - 16 hours per day or more to maintain a chlorine level, then go back and check the stabilizer level.

If you want to run your pool 16 hours per day for other reasons, then turn your chlorine output percentage down so you are not running your cell so much.

Remember that your salt cell has a 10,000 hour lifespan and once you have used up those hours, the cell will need to be replaced.

THIRD, remember that you do not need to run your chlorine levels at 5 ppm like you might do on a chlorine tablet pool. If you are trying to get 5 ppm levels, then you are probably running the system too hard to get there and that will result in high pH levels from the long run times.