



## INDOOR POOL - The Chloramine cycle of Bad Water = Bad Air



Before a swim meet the pool water is balanced and the air is fine.



Warmups begin and hundreds of swimmers get in pool without taking a shower. Mono-chloramine formation begins in less than 30 minutes.



2<sup>nd</sup> stage of warmups begin and a new group of swimmers get in pool without taking a shower. Some swimmers have peed in pool. Di-chloramine formation has now begun.



The second session of meet warmups begin and the cycle repeats itself but is worse since many of the chloramines from the first session still are in pool. Bad air has become a real issue for coaches/officials and swimmers and spectators.



The first session of meet begins and swimmers are peeing in warm-up pool and still not taking showers. Tri-chloramines are being formed and the air quality is starting to be affected. The majority of pool water has still not cycled through the medium pressure UV in filter room.



The first day has ended and the pool water is a mess – thus bad air quality. The pool operators decide to SHOCK the pool to try to get rid of some of the chloramines. This actually compounds the problem on second day of meet and accelerates chloramine formation.



Overnight the pool water has gotten through the filter room UV twice so the chloramines have been reduced. However - the water is more susceptible to chloramine formation because of the SHOCKING or a high CL reading. The repeat of day 2 warmups by swimmers not showering takes its toll quicker and bad air starts earlier in the day and is worse.



Day 2 - The pool air quality is now at the unsolvable stage. No amount of fresh air introduced into the pool room will help. 1 swimmer peeing in the water can adversely affect 10,000 gallons of pool water for over a week. 1 swimmer not taking a 15 second shower before they get in the pool can affect a thousand gallons of water for days. There are solutions to the problems but they must start with swimmers taking showers and not peeing in the pool. This is first and foremost a WATER QUALITY problem that causes an AIR QUALITY problem. Coach's educating swimmers and making sure they shower are the first step to the solution.