

Water purification: A Healthier and Less Expensive Alternative to Chlorine is now available in Costa Rica

For decades we have tolerated the use of Chlorine in our pools and in our drinking water as a "Necessary Evil". Nobody likes it but the alternative of unpurified water with algae and bacteria was an even less appealing option. Who among us has not walked out of a pool after a couple of hours and had red, irritated eyes and the smell of chlorine attached to our bodies and clothes, or drank tap water and could smell and taste the chlorine present. Not pleasant experiences but what choice did we have?

We now have a choice named, "ChlorFree". A healthy and less expensive way to purify our water. Yes, this is not a misprint... Less expensive!! ChlorFree is Dr. Stephen Verdon's system to maintain water purity without the heavy use of chemicals. He said he rediscovered it 23 years ago after becoming concerned for his children's health while they were in swimming pools. The concept behind ChlorFree is not new. Water bottling plants, for example, use it. But it is used infrequently in public drinking water systems and public swimming pools around the world, mainly due to a lack of knowledge of its existence and benefits, and of course chlorine vendors are not going to mention it. The concept was conceived around 400 years ago, said Verdon. ChlorFree uses ionization to purify water. This involves the use of an encased battery to lightly Charge the water with Ionization, thereby eradicating algae and bacteria and sustaining the water's cleanliness.

Ionization involves the use of a safe, low voltage DC current generated internally by metal electrodes. As the ions of metal attempt to move from one electrode to the other, some become suspended in the water and ionization occurs. The ions attack the outer coat of bacteria and disrupt their balance, attack DNA production and speed up the Disinfection process.

The ChlorFree System requires two weeks in a pool before the water is completely purified.. Such ionic batteries last for a full 12-months before replacements are needed. Cost depends on the size of the battery and the size of the swimming pool. Chlorine is a naturally occurring element found in compounds in the environment. In the lab it occurs as a yellowish-green gas but can be liquid. As a disinfectant, chlorine bonds with and destroys the outer surfaces of bacteria and viruses - similar to the process of ionization. In addition to regular chlorine, various providers now stock what they call organic chlorine. Verdon, nevertheless, says that it is simply chlorine. "Chlorine is chlorine, it can't be any other way. This is just a way of appealing to the health-conscious market."

Verdon has been working in Costa Rica on the ChlorFree project for over three years. He said that around 23 years ago he was working on the same concept in Miami, Fla. where large chemical companies hounded him and his employees. Now, Verdon says that he has been receiving the same type of resistance from chlorine vendors here in Costa Rica. He said

sometimes unknown persons will even put strange chemicals in the pools he services in order to induce contamination. The pool water can turn a nasty bright green when this happens.



Verdon said that he has test results showing that outside chemicals were the cause of contamination and that problems in some pools did not come from the failure of his system to do its job. This happened at a hotel in Guanacaste. The hotel's manager has since removed the ChlorFree system from the pool. The manager said that the owner of the hotel wanted the system taken out of the pool to avoid further problems. "It all started with a lot of sabotage," he said. Tests showed problems came from chemical contamination, there was no biological contamination, said the manager. Asked about ChlorFree's effectiveness, the manager responded: "It worked fine, it's done a great job. The system has its own merits."

The Best Western Hotel in the downtown San Jose area also experienced problems, according to Carmen Santos, Stephen's wife. She said that representatives of a chemical company threatened to close the hotel's pool because it didn't have enough chlorine. Mrs. Verdon said the hotel then showed the representatives a copy of the Ministry of Health approval for ChlorFree. José Joaquín Ramírez of the hotel's pool maintenance, said that ChlorFree maintains a "crystal clear" pool. Joaquín added: "Chlorine is a big problem for people." ChlorFree received approval from the Ministry of Health in May of 2001 for its use in public-access swimming pools.

An independent laboratory report carried out by Dr. Ana Hernández on a ChlorFree-provided pool found the pool safe for use and concluded the water was good enough to drink. Dr. Hernández is based at the Laboratorio Clínico in Liberia, Guanacaste. A study at the University of Arizona showed ionization with chlorine residue to be 1,000 times more effective at eliminating algae than chlorine.

Despite Verdon's claims that ChlorFree works 100 percent independently, the ministry's swimming pool regulations say that a "residue" or a small amount of chlorine (0.01ppm) must still be added to public pools in order to maintain Legal Limits. For chlorinated pools

by comparison, the level required is much greater: 1.5 - 3 parts per million.

Verdon believes this isn't required, so the company is working on a proposal that will offer the option of eliminating chlorine completely. Verdon's home pool uses "no chemicals" and the water test's "Potable".

Pool users contacted at locations supplied by ChlorFree reported varying opinions on the difference between swimming in a chlorinated pool and a ChlorFree pool. Swimmers at the Barcelo San José Palacio Hotel, which uses ChlorFree in its pool, said that they could feel the difference.

In addition to swimming pools, Verdon wants to have ChlorFree installed into the public drinking water systems here, too.

The University of Costa Rica's Microbiology Department in June of this year concluded after a water examination experiment that ChlorFree water is drinkable. This fuels the product's suitability for use in Costa Rican aqueducts for drinking water.

In the U.S. virtually all drinking water systems rely on chlorine and chlorine-based products for purification, according to the World Chlorine Council. Likewise, here in Costa Rica chlorine dominates in drinking water purification. Among Verdon's clients is the Community of Playa Flamingo's Water Department. The whole town of Flamingo, including its residential homes and Major Hotels are connected to the ChlorFree System utilizing their aqueduct. Another client is the University of Costa Rica which uses ChlorFree in its Guanacaste swimming pool. Marvin Espinoza, who is in charge of pool maintenance, commended the pool for its cleanliness. He said students and the public in general said that it did not hurt skin or eyes. Espinoza also said that the University of Costa Rica found ChlorFree to be cheaper, citing an 80 percent reduction in chlorine consumption. Murillo at Piscinas Aquarium understandably commented that non-chlorine products are much more expensive.

Nonetheless, chlorine remains the market leader for swimming pool and drinking water purification. Verdon sees this as a result of the need to dispose of chlorine, which is a by-product of other chemical processing with little other potential usage or means of safe disposal. So, it is used for water cleansing purposes. For the Health of everyone and for Our Planet, Verdon wants this practice to change. He says water supplies and pools can be purified without the use of chemicals.

"It would be a Great-Day if Costa Rica could lead the way in showing the rest of the World a System that is Healthier, Safer and Less Expensive to use."

For more information visit: www.ChlorFree.net or call: (506) 665-0896