



How Does Natural Ionization Work?

The UltraStream is a 'natural' water ionizer and alkalizer. It alkalizes and ionizes the water as it passes through almost a pound of slow release pure magnesium plus calcium and the naturally occurring minerals are dissolved into the water. It uses simple chemistry that abounds in nature – and no electricity.

Let's consider the more well-known and advertised electric ionizers. By seeing how they ionize, we can appreciate the difference between electric and natural.

Electric ionizers use a process called electrolysis. Electrolysis of water is the decomposition of water (H_2O) into oxygen gas (O_2) and hydrogen gas (H_2) due to an electric current being passed through the water.

Water electrolysis does not convert 100% of the electrical energy into the chemical energy of hydrogen. The process requires more extreme potentials than what would be expected based on the cell's total reversible reduction potentials. This excess potential accounts for various forms of overpotential by which the extra energy is eventually lost as heat.

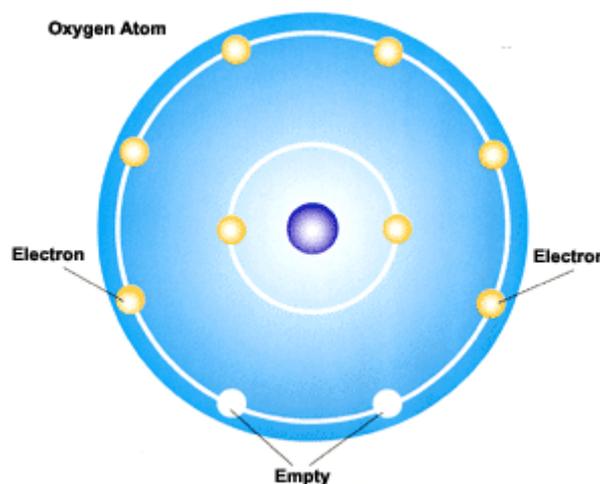
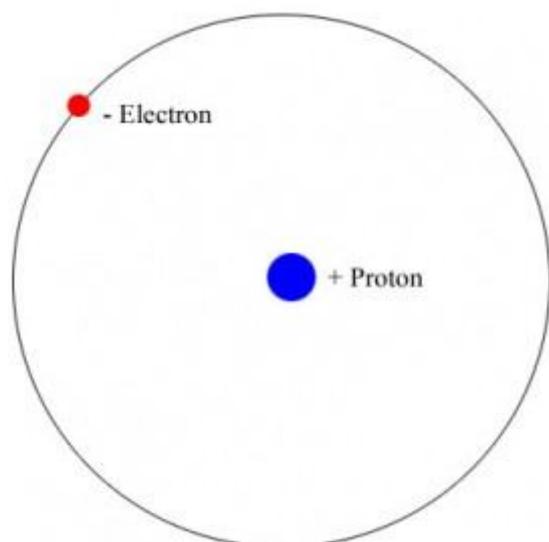
The UltraStream on the other hand, simply creates hydrogen gas (H_2) by passing water over magnesium metal. According to the following reaction " $Mg + 2H_2O + Mg(OH)_2 + H_2(g)$ ". Then the $Mg(OH)_2$ separates to form Mg^{2+} and $2OH^-$, which is alkaline".

We now have an abundance (could say trillions) of these hydrogen molecules output water.

A hydrogen atom is often called the primal antioxidant because of its unique ability to attract the most toxic free radicals within the body. When they unite with these free radicals they reform into H_2O (i.e. $2OH\cdot + H_2 \rightarrow 2H_2O$)

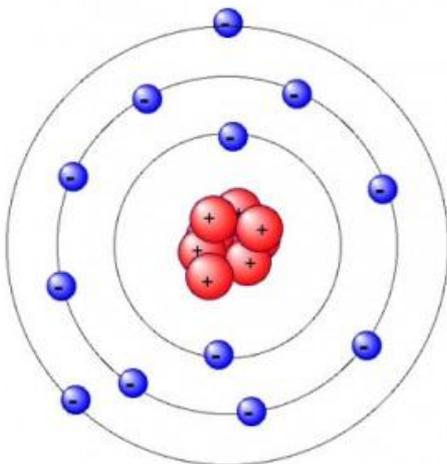
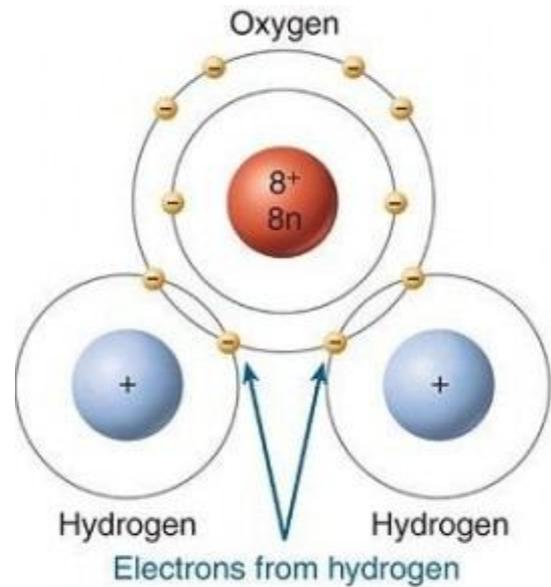
Hydrogen easily passes through body tissue and into the cells, so a daily supply of hydrogen is a constant detoxifier at very low cost to you. Hydrogen has been studied in well over 80 disease-specific scientific studies.

Oxygen is the 8th element on the periodic table. It has two electrons in its inner shell and 3 pairs (six) in the outer. It requires 4 pairs (eight) of electrons in the outer shell for stability, so it never stops its search for equilibrium (right).



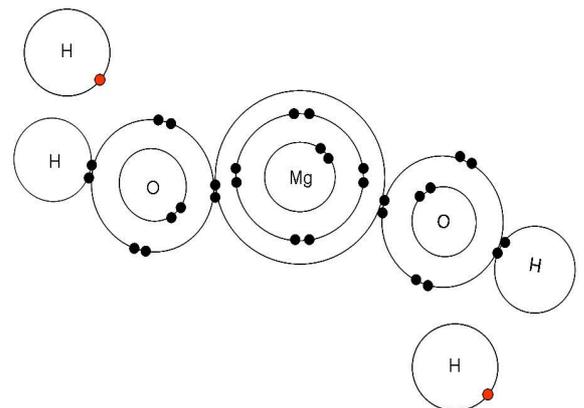
Hydrogen is the first element and has 1 electron and 1 proton (left).

2 Hydrogen atoms connect with 1 Oxygen to make the H₂O molecule (right).



Magnesium is the twelfth element. It has 1 pair of electrons in the inner shell, 4 pairs in the middle and 1 pair in the outer shell (left).

When Water and Magnesium unite, here's how it looks (right).



Multiply this by millions of the same reaction and you will get an idea of what happens as water passes through our *O-Dobi* media.

The 2 free hydrogen atoms unite to create therapeutic molecular hydrogen. The magnesium in the UltraStream is now ionized and bioavailable in the same way that nature provides it. As we consume molecular hydrogen, one glass at a time, we receive the best water available, which is negatively charged and rich in the universe's most powerful antioxidant, Molecular Hydrogen (H₂ gas).

To purchase an UltraStream go to www.alkaway.com.au or call 1300 255 292. Happy Hydrating! ☺