Understanding PH

The concept of the acidity or alkalinity of your body - or of water - is based on the pH scale. So it's necessary to have a basic understanding of what pH is.

PH is simply a measure of the concentration of hydrogen ions. In fact, the acronym "pH" is short for "potential of hydrogen." The higher a liquid's pH, the fewer free hydrogen ions it has; the lower its pH, the more free hydrogen ions it has. One pH unit reflects a tenfold change in ion concentration - for example, there are ten times as many hydrogen ions available at a pH of 7 than at a pH of 8 ^[II].



The pH scale goes from 0 to 14, and a pH of 7 is neutral.

Anything with a pH below 7 is considered acidic, with battery acid being the most extreme example, around 1. Anything with a pH above 7 is alkaline (or basic), with lye at the top of the scale, around 13.

Natural water on our planet ranges in pH from 6.5 to 9.0, depending on surrounding soil and vegetation, seasonal variations and weather, and even time of day responses to sunlight. Human activities further influence the pH of our water, from the barrage of toxic industrial pollutants.

According to an educational website called "Water on the Web"2:

"Pollutants in water can cause it to have higher algal and plant growth, as a result of increased temperature or excess nutrients, causing pH levels to rise. Although these small changes in pH are not likely to have a direct impact on aquatic life, they greatly influence the availability and solubility of all chemical forms in the lake and may aggravate nutrient problems.

For example, a change in pH may increase the solubility of phosphorus, making it more available for plant growth and resulting in a greater long-term demand for dissolved oxygen."

Most aquatic animals and plants have adapted to life in water with a very specific pH, and will die from even slight changes. A pH below 4 or above 10 will kill most fish, and very few animals can tolerate waters with a pH below 3 or above 11 ^[v].

With living systems being so sensitive to changes in pH, it should comes as no surprise that YOU, as another living organism on this planet, would be sensitive to your water's pH as well.