

## pH and its Importance to Your Health

As a field of study Biological Medicine Physicians, as far back as 1850, have been studying and measuring pH to determine its role in disease as well as health. The information contained in this section is a distillation of information gathered from dozens of sources and condensed into a few key points for your review.

### A Mathematical Explanation of pH

Quite simply the definition of pH is “potential for Hydrogen.” All known substances are divided into 3 categories, acid, alkaline or neutral based on the concentration of positively charged hydrogen ions contained in the solution. The greater the concentration of H<sup>+</sup> ions the more acidic the solution. This concentration is expressed, or written, in a mathematical reference known as a logarithm. For those of you who are not mathematicians, a logarithm is a sort of “shortcut” manner of recording the number of zeros that would follow a number, i.e., 10<sup>2</sup> spoken as 10 to the second power is 10x10 or 100 (2 zeros), 10<sup>3</sup> is 10x10x10 or 1000 (3 zeros), and so on.

pH is measured on this logarithmic scale from 0-14 where 0 is the most acidic reading and 14 is the most alkaline reading. All fluids, including all bodily fluids, fall somewhere on this 0-14 scale depending on how many positively charged hydrogen ions that fluid contains. Below is a chart which demonstrates the mathematical differences in acidic, alkaline and neutral substances.

Numerical Reference	pH Designation	H <sup>+</sup> Concentration
<b>pH 0</b>	<b>Strong Acid</b>	<b>1.00 (fully saturated)</b>
<b>pH 7</b>	<b>Neutral</b>	<b>0.0000001</b>
<b>pH 14</b>	<b>Strong Alkali</b>	<b>0.00000000000001 (devoid)</b>

### Ideal pH Ranges in the Body

In an ideally functioning body the first morning's saliva would register between pH 6.5-6.75, urine would register between pH 6.5-6.8 and blood would register between 7.3-7.35.

Each day our bodies diligently strive to achieve those pH balances. If necessary our bodies will “steal” our organ or musculo-skeletal systems of nutrients to achieve these pH readings. These nutrient losses slowly erode overall health.

Exhaustive research in the Biological Medicine field has determined that tissue breakdown and mutation takes place as acid levels in the blood, urine and saliva rise. Elevated acid levels promote the growth of pathogenic bacteria, viruses, fungus and cancer cells. The overgrowth of these pathogens accelerates the breakdown of healthy tissues leading to ill health and disease.

### **The Causes of an Acid Imbalance**

The four major contributing factors behind an acid/alkaline imbalance are:

- **Acid Forming Foods:** Regular consumption of highly refined products, sugars, white flour, meat, alcohol, soft drinks and fried foods
- **Stress:** Life stressors create an artificially high production of adrenaline which is a naturally acidic compound.
- **Exposure to Toxic Chemicals:** Many of the products we routinely use to clean our bodies, our clothes and our homes contain significant concentrations of toxic chemicals. These chemicals are either taken into the lungs or are absorbed through our skin.
- **Impure Water:** Due to improper chemical dumping, run off of fertilizers, pesticides and herbicides, an overgrowth of microbes, as well as the very chemicals used to “clean” our municipal water supplies, the water from our tap is often a source of impure and/or acidic water. Each year there are more than 900 deaths and 900,000 illnesses reported in the US as a result of tainted water.