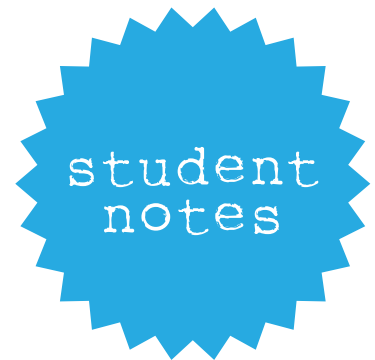


Middle and High School Curriculum

NUTRITION 101

LESSON FIVE ACID AND ALKALINE BALANCE

by Dr. Heather Manley, N.D.





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NUTRITION 101

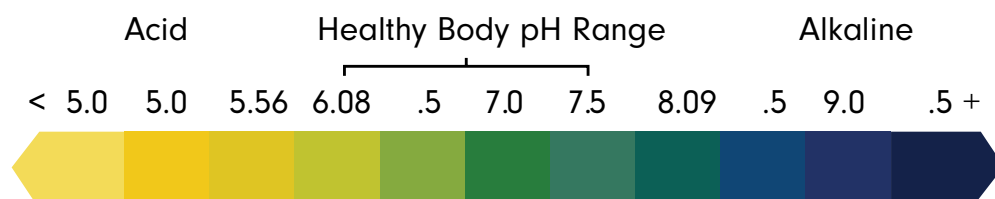
LESSON 5 Acid and Alkaline Balance

STUDENT-FRIENDLY OBJECTIVE

I will have a working knowledge of pH balance in my body.

pH

pH refers to “potential of hydrogen” which indicates the measurement of hydrogens ions in a solution or the measurement of acidity or alkalinity of a solution. In this case, the acid- alkaline balance relates to the chemistry of the body’s fluids as measured by pH scale ranging from 0 to 14. A high pH number indicates less hydrogen ions and more oxygen, and thus alkaline, whereas, a low pH indicates the opposite. When a solution is neither acidic or alkaline, it will have a pH of 7.



For the chemist

Water (H₂O) ionizes* into hydrogen (H⁺) and hydroxyl (OH⁻) ions. When these ions are equal, the pH is a neutral 7. Acidity occurs when there are more H⁺ ions than OH⁻ ions then the water. The opposite, OH⁻ ions outnumber the H⁺ ions then the water, the pH is alkaline. The pH scale goes from 0 to 14 and is *logarithmic indicating a pH of 4.5 is 10 times more acid than 5.5, 100 times more acid than 6.5 and 1,000 times more acid than 7.5.

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- * **ionization:** the process of converting an atom or molecule into an ion by removing or adding charged particles.
 - * **logarithmic** means that each step is ten times the previous.



Eat a few almonds – they are alkalinizing, packed with protein & tasty!

Acidity and Alkalinity

ACIDITY IN THE BODY

When the body is more acidic than desirable, it gives rise to an internal environment that is much more susceptible to disease. An acidic environment is a breeding ground for (bad) bacteria, yeast, fungi, viruses and cancer may thrive in an acidic environment.

Acidic foods: White foods: bread, rice, sugar and soda pop, dairy, eggs, grains, meat.



Generally, fruits are the most acidic foods.

ALKALINITY IN THE BODY

An alkaline internal environment allows for normal body function to occur (resist disease) and bacteria, viruses, yeast and cancer can not live. When the body is more acidic, it will pull the alkaline minerals reserves to create an alkaline environment. Over time, with a poor diet, high stress life, and lack of exercise, the reserves may become too low for compensating.

Alkaline foods: Vegetables- eat a vast colorful array (especially green) and peas, beans, lentils, spices, herbs and seasonings, avocados, and seeds and nuts.



Aim for a 70/30 ratio between high alkaline versus acid foods.