

## Acid/Base Principles

A basic understanding of the importance of a balanced pH is central in developing a healthy individualized diet. Such understanding will enable one to eat those foods that support rather than inadvertently challenge or stress our body's healthy function.

The 75 trillion cells that cooperate collectively as one body are continuously bathed in what is often called an 'internal ocean', roughly ten gallons of fluid, or about 70% of the body's total mass. Except for the acid contents of the stomach, all of this intracellular fluid, extra-cellular fluid, blood, lymph, bile, saliva, urine, etc. must be maintained within a mildly alkaline pH range for the cells to function normally. For example, the required pH for the blood is between 7.35 and 7.45. When this ratio shifts even slightly, the body goes through rapid metabolic and respiratory responses to attempt to maintain the slightly alkaline environment. Beyond this absolute equilibrium convulsions, coma, and death will ensue.

Obviously the body does a tremendous job of maintaining pH balance daily, though not always without discomfort. Proteins produce sulfuric and phosphoric acid. Carbohydrates and fats produce acetic acids and exercise produces lactic acid. When more acid has been generated than can easily be eliminated through the lungs, colon, or kidneys, the body will secondarily resort to elimination through the skin, sinuses and other mucous membranes. The common cold and many other symptomatic conditions are just this, our internal intelligence re-establishing a healthy balance.

Knowing these things prompts one to adopt a diet that supports and eases the body's workload. This is done by supplying adequate quantities of alkaline forming minerals. The basic minerals; primarily sodium, calcium, magnesium, potassium and iron, among other things form buffering salts. Some acids, like the lactic acid generated by exercise, can be eliminated through increased respiration leaving our alkalinity intact; whereas, dietary acids require buffering before being excreted through the channels of elimination, further acidifying the system by robbing our bodies of these elements.

The foods that contain the greatest percentage of these alkaline forming minerals are the foods that help neutralize poisons generated from excess protein, stress, and refined foods. These neutralizers can be used immediately if necessary, or they can be stored as part of the alkaline reserve. Adopted gradually, a diet of approximately 80% alkaline forming foods will help build up this reserve and move one in the direction of greater balance and health. Acidity additionally causes anxiety and inflammation.

The chart places different foods along the alkaline/acid continuum, allowing easy reference and discernment of the influences foods are having on the body's overall acid/alkaline balance. By using pH test strips first thing in the morning with the saliva and urine, it is possible to see clearly what the state of acid balance is in the body and what the net contribution the diet is making. Saliva pH represents the blood and stands for what degree of alkalinity is present in the tissues. The urine represents the excretion of acid from the prior day's food intake. With modest practice, this understanding opens into simple and natural food choices and potentially bringing control to our acid/alkaline balance and stress reduction to our bodies.