

Monitoring pH for Optimal Health

"One thing we can do to promote health & prevent disease is to keep the body in homeostasis and let it do what it does best: repair, rebuild & replenish."

One of the foremost things we can do to promote health and prevent disease is to keep the body in homeostasis and let it do what it does best: repair, rebuild and replenish. To me the first key to homeostasis is optimal pH. The more you understand physiologic pH the more you will be convinced about how important it is.



Without the correct pH, hormones and enzymes cannot function at their maximum capacity. The optimal pH in oxygenated arterial blood is 7.35 -7.45, optimal pH in carbon dioxide laden venous blood is 7.3 to 7.4. Blood pH is VERY tightly regulated, so even a drop to 7.25 brings the body to a relative acidic state. The blood compensates by using natural buffers to return to optimal levels.

Buffers are dependent upon minerals. Sodium, potassium, calcium, magne-

sium and zinc are all essential for the buffer system to work. Most Americans are in a state of mineral deficiency, so where do these minerals come from? That's right, they are recruited from tissue and bone. For example, a pH drop from 7.3 to 7.2 in the blood will stimulate bone degeneration or osteoclastic activity as well as inhibit bone rebuilding or osteoblastic activity.

The pH scale goes from 0-14 and is logarithmic, which means each step is

an increase of 10. In other words a pH of 4.5 is 10x more acidic than 5.5 and 100x more acidic than 6.5 and 1000x more acidic than 7.5.

Reduced intracellular pH also causes inflammation and impaired mitochondrial function. This means a reduction in the ability to make more energy and on top of that causes an increase in "energy demand." The cell has to do more with less energy. Reduced intracellular pH also brings increased intracellular free

radicals with less efficient metabolism, protein synthesis and increased membrane free radical production.

I recently learned another way to look at pH from Dr. Jerry Tennant an ophthalmologist who struggled with encephalitis and various neuropathies for 7 years before he cured himself. In his book "Healing is Voltage," Dr. Tennant reviews that pH is hydrogen potential but goes further to say that pH is also a function of voltage. A pH of 0 is the same as +400 mVolts. A pH of 14 is the same as -400 mVolts. Cells operate best at 7.35 - 7.45 or -20 to -25 mVolts.

He discusses that chronic diseases are always associated with an acidic pH which is the same thing as saying that chronic diseases is a loss of voltage. For me this concept rings true; cells need energy to protect themselves, reproduce, carry on respiration etc., etc. Health is associated with the presence of voltage. In other words, healthy people have an alkaline pH. But here is the point that really hit home; the ability to hold and conduct a charge is dependent on minerals.

Minerals come from plants. How many ways and how many times have we heard we need to eat a greater percentage of a plant based diet. It's a common thread in any natural healing system. One way to determine pH is with first morning urine. The pH of first morning urine reflects the body's ability to buffer excess acidity or net acid excess.

According to Dr. Russell Jaffe, the ideal pH should be 6.5 - 7.0. This means that a pH below 6.5 indicates that the buffering "functional" reserve of the body is deficient. The beauty of this test is that it is something that the patient can do for themselves

to monitor their own diet. You can provide the pH paper, patients can bring the results to you and you can monitor their progress and suggest therapeutics that will slowly change their cellular energetics.

I have prepared a link with suggestions that starts with drinking pure water and increasing the percent of fruits and vegetables. The challenge is that some people have not trained their taste buds to enjoy a plant based diet. To me this is where green drinks come into play. Biotics Research has put together an organic blend of heirloom plants as both dried juice and sprouts. It's loaded with naturally chelated minerals in a plant based form. It's the only green drink that I know of that is from heirloom seeds and is 100% organic.

Nitric Oxide has been the big buzz in the medical literature during the last decade. NitroGreens increases the body's ability to make nitric oxide naturally. Mixing ½ scoop of NitroGreens with some vanilla or chocolate almond milk over ice is very refreshing as an afternoon pick me up. Personally I really enjoy mixing NitroGreens with vanilla coconut milk. But everyone has different tastes and the key is to have fun and use what flavors your patients already enjoy. Start with a small amount of NitroGreens and increase until your body starts to crave higher doses.

Wellness is a journey and sometimes you have to start slowly with your patients' taste buds. The goal is to reduce the processed "acid forming" foods, increase fruits and vegetables and optimize pH so the body can repair, rebuild and replenish.

Thanks for reading this week's Tuesday Minute edition. I'll see you next Tuesday.