

pH Too Acidic... Try Bone Soup

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An unknown factor and a root cause of many illnesses is metabolic acidosis or relative acidity. Here's why. Once the body is in a state of relative acidity, enzymes, cell membranes, and even the hemoglobin's ability to release oxygen is compromised.

Some of the other effects of metabolic acidosis are reduced bone formation, accelerated bone resorption, suppression of growth hormone and pituitary hormones, increased membrane free radical production and fluid retention.

Another result of an acid chemistry is a reduced oxygen state called hypoxia. Remember cancer, bacteria, viruses and fungi thrive in an oxygen starved environment. The optimal pH of oxygenated arterial blood is 7.35 -7.45 and that of carbon dioxide laden venous blood is 7.31-7.41. Intra cel-



lular pH is 7.4 plus or minus .1. Small reductions in pH, although still technically alkaline, produce this state of "relative" acidity.

On previous Tuesday Minutes we've discussed how vegetables and green drinks, specifically organic green drinks like Nitro-Greens, provide healthy buffers to reduce acidity. Even vitamin D can be considered a major influence to normalize pH by its role in calcium metabolism. If the blood pH is too acidic, it

will pull calcium and other minerals from the bones to normalize or buffer the delicate blood pH. That's why people in non-western cultures who ingest far less calcium than ours have stronger bones. Non-western cultures ingest less acid forming foods. Also, their diet produces a greater ability to buffer any acid forming foods they do eat; simply, they eat more vegetables.

It's about regulating the pH and keeping the calcium in

the bones. One way to do that, which you may not have thought of is Bone Broth. Hear me out. If we have an acidic chemistry so that calcium and other key minerals are pulled out of our bones, what happens if we create an acid based medium in a soup and use healthy soup bones and organic vegetables as a base? Exactly, the minerals will be pulled out of the soup bones just as they are pulled out of our bones.

Dr. Francis Pottenger, author of the famous cat studies, taught that the stock pot or soup pot was the most important piece of equipment to have in our kitchen. Before I go further let me emphasize we want to use bones from "healthy" animals. The benefits far outweigh the cost. For example, if you are using bones from range fed beef, the fats will be naturally higher in omega-3 fatty acids and conjugated linoleic acid.

Not only do we get the minerals from bones but we also get cartilage factors, collagen, gelatin, amino acids, and glycoaminoglycans. In fact, some of these factors may be more important than the minerals. Gelatin for example has been hailed as an aid for its ability to improve digestion in both infants and adults. Gelatin appears to improve the digestibility of milk and beans as well as the utilization of grains and meats.

We are all familiar with the need to increase the nutrients that will heal cartilage and stimulate connective tissue repair. Bone broths can provide these factors as part of our food. So have your patients get out their crock pots and think soup!

In traditional cookbooks when we talk about bone broths we are really talking about making soup stocks. So the term broth and stock are really similar for what we are trying to accomplish. You can consult cookbooks for recipes or you can click below for a simple recipe. But the easiest method is to use a crock pot.

At night before you go to bed, fill the crock pot with soup bones from beef, fish, chicken or lamb and enough water to cover the bones. Add 2 tablespoons of vinegar per 1 quart water or per 2 pounds of bones. Turn it on low and go to sleep. In the morning, skim off surface impurities; add your choice of root vegetables like carrots, turnips, etc. and cook on low all day. When you come home from work, add fresh vegetables until they are tender. Throw away the bones and enjoy an awesome meal.

Coming home to a house filled with the aroma of fresh soup is a wonderful thing. Broth may be also frozen for months or kept in the refrigerator for 5 days until you are ready to add veggies and make the soup. Once you master the soup you can pass the idea along to your patients.

In addition on the subject of bones, you might check out the link below on Osteoporosis. Osteoporosis is a big factor for all your female patients and one that they are aware of. Any encouragement and lifestyle changes that you can help them implement now will be appreciated in their later years.

Thanks for reading this week's edition of the Tuesday Minute. Enjoy the soup; and I'll see you next Tuesday.