Balancing an Acidic Body Through Food

Imagine if physicians and other health-care professionals routinely ignored a fundamental aspect of health. That is just what happens when it comes to recognizing imbalances in the body’s pH (acid-alkaline ratio).

Conventional medicine ignores pH balance — while holistic doctors recognize that our bodies are continually striving for this balance, and that chronic imbalance leaves us susceptible to disease. Most important: Acid-alkaline balance is easy to regulate. You can make very simple changes to your diet — and improve your body’s pH balance within hours.

Here’s what you need to know...

pH stands for “potential of hydrogen.” The concentration of hydrogen atoms in a solution determines its pH value, measured on a scale of 0 to 14, with lower numbers indicating higher acidity. Water, which is considered neutral (neither acidic nor alkaline), has a pH of 7. (To do a simple pH balance test yourself, see below.)

The body’s pH balance strongly influences the risk for osteoporosis, sarcopenia (muscle loss), fractures and kidney stone formation — and possibly diabetes, high blood pressure, heart disease, thyroid problems, cancer and other insidious conditions.

When the body’s fluids become too acidic, minerals are pulled out of bones and tissues to compensate — leading, in the long term, to thinner bones and lower muscle mass. Overly acidic tissues also make one susceptible to inflammation (a known risk for many chronic diseases), impair enzymatic reactions in cells and overload the lymphatic system, impeding the body’s natural detoxification process.

UNDERSTANDING ACID AND ALKALINE

Whether or not you realize it, you already understand some of the basics of acidity and alkalinity. Dill pickles get their tartness from vinegar, an acid. And milk of magnesia, which is alkaline, can help settle an upset (overly acidic) stomach.

Physicians learn in medical school to recognize the symptoms of renal acidosis (a sign of kidney failure) and ketoacidosis (muscle tissue breakdown in people with type 1 diabetes). They also recognize that when urine is more alkaline, you are better protected from developing a certain type of kidney stone. However, doctors often miss more subtle signs of low-grade metabolic acidosis (roughly translated as a chronically acidic system) that can affect long-term health.

How common is this? There are no clear statistics, but my hunch is that low-grade metabolic acidosis affects the majority of people, based on the fact that a healthful diet makes for a healthful pH — and most Americans consume too much salt and not enough fruits and vegetables. Most of the patients I test have acidic readings. With healthful changes, their health problems often improve as their urine readings (which reflect blood pH) become more alkaline. (The opposite condition, a chronically alkaline system, is called alkalosis, and it is extremely rare.)
NUTRIENTS THAT AFFECT YOUR pH

Unfortunately, the importance of acid-alkaline balance to one’s health is controversial, which helps explain why it is not a more common part of health and wellness discussions. The original research was published almost a century ago, and there has not been much scientific study done since then. Books written on the subject rely on anecdotal evidence — and many contradict one another. In recent years, researchers at the University of California, San Francisco, have begun to establish a sound scientific foundation for understanding the health problems associated with chronic low-grade acidosis.

The dietary problem is not one of eating single foods that are acidic, such as tomatoes or oranges. Rather, it’s how several specific nutrients in foods influence your blood pH, which is optimal at 7.35 to 7.45. Even small increases in the acidity of your blood can have pronounced ill effects on your body’s cells.

**Helpful nutrients.** Foods rich in calcium, magnesium and especially potassium or bicarbonate are alkaline forming, meaning that they shift the body toward a neutral or alkaline pH. This pH enables bones to hold on to calcium, which helps keep them strong. Fresh fruits and vegetables are major dietary sources of alkaline potassium (raisins and spinach are especially rich).

**Problematic nutrients.** Foods rich in chloride, phosphate and sulfate are acid forming, meaning that they shift the body toward greater acidity. Any food with added salt (sodium chloride) should be suspect, including processed foods in jars, bottles, cans and boxes, as well as restaurant meals, especially fast foods.

BAD FOR THE BONES...AND MORE

When it comes to pH, the kidneys rule. They play a central role in maintaining the body’s pH. When acid-yielding foods lower the body’s pH, the kidneys coordinate efforts to buffer that acidity. Bones release calcium and magnesium to reestablish alkalinity, and muscles are broken down to produce ammonia, which is strongly alkaline. By the time the response is complete, your bone minerals and broken-down muscle get excreted in urine. Over a lifetime, this slow breakdown of bone and muscle catches up with people. In fact, acidosis seems to increase with age, which may reflect a lifelong poor diet. Researchers now believe that weak muscles set the stage for falls and fractures in the elderly.

**The kidney stone connection:** When our bones release calcium to buffer acidity, there’s a risk that some of the calcium will separate and form a kidney stone.

It is ironic. Millions of people eat calcium-rich dairy products — milk, cheese and yogurt — in an effort to maintain their bones. But most dairy products are acid-forming. That might partially explain why the US has high rates of osteoporosis, even though Americans consume huge quantities of dairy. Eating an overabundance of meat, poultry and seafood is also problematic. *Reason:* The breakdown of protein releases sulfuric acid, further contributing to an acidic pH. Even whole grains are acid-forming. *Trick:* Breathing slowly helps to reduce acidity.
EATING FOR A BALANCED pH

Eating to maintain a neutral or slightly alkaline pH is easier than you might think, as a pH-friendly diet is consistent with other healthy eating habits. When my patients eat more healthful foods, their main health problems diminish and numerous other unexplained problems (low energy levels, joint and muscle pain, rashes and acne) start to improve. Here’s what I recommend...

Limit your salt. Salt consists of sodium and chloride — the combination of the two molecules sets the stage for low-grade metabolic acidosis. Healthy people require only up to 1,300 mg of sodium daily. When grocery shopping, read food labels carefully. Good rule: Opt for fresh foods over anything that comes in a package.

Eat lots of veggies. Strive to make one-third of your diet consist of fresh or frozen vegetables and fruits. A study published in The American Journal of Clinical Nutrition found that high consumption of potassium, found in fruits and vegetables, and the resulting more alkaline pH, were strongly linked to muscle preservation in people age 65 and older. Beware: Most canned vegetables contain added salt, and some canned fruits contain added sugar. Another good rule: Fill half of your plate with vegetables, one-fourth with fish or other lean protein, and the remaining one-fourth with a small amount of starch (such as a sweet potato or brown rice).

Stay hydrated. That means drinking mostly water, not soft drinks, alcohol or caffeinated beverages. There is water in fruits and vegetables, too. Remember: It is especially important to drink more water if you fall short on your daily intake of vegetables and fruits. Interesting: A squeeze of lemon in your water adds taste and has an alkalinizing effect in your body.

Healthful “green” drinks can help balance pH. These drinks, which feature ingredients such as wheatgrass, barley grass, and chlorella, come as powders and can be mixed in a glass of cold water or diluted juice at home.

STRENGTHEN WITH SUPPLEMENTS

Studies have shown that supplements of potassium bicarbonate and especially potassium citrate can counteract an acid-forming diet and reverse osteoporosis. In a study published in Journal of the American Society of Nephrology, 161 postmenopausal women with low bone mass were given 1,080 mg of potassium citrate or 2,250 mg of potassium chloride daily for one year. Results: At the end of the study, the control group (those taking potassium chloride) showed an average bone-density loss at the lower spine of 1%, while the group taking potassium citrate had a nearly 2% increase at the lower spine and the hip. This group also excreted less calcium in their urine.

Warning: By law, supplement companies cannot include more than 99 mg of potassium per daily dose. Large doses can alter the sodium-potassium ratio too quickly and lead to an irregular heartbeat in patients with kidney disease and those taking cardiovascular medications. (This is not an issue for
healthy people.) Don’t worry about eating too much potassium, though — the potassium in foods (such as bananas) is absorbed more slowly than the potassium in supplements.

As we have seen, eating more fruits and vegetables is an easy way to tip your body’s natural pH into the right balance. Because these foods provide a variety of important nutrients, including vitamins, minerals, antioxidants and fiber, eating ample amounts of vegetables and fruits is simply the smartest way to live.

A general rule: All fresh vegetables and fruits help to maintain a neutral or slightly alkaline pH. Most other foods are acid-forming, potentially weakening bones and muscles. The key is striking a balance by eating a good mix of foods. Simply put: Consume a lot of fruits and vegetables, and not too many acid-forming foods, and your body will naturally find the right pH balance.

**Acid-forming foods** include beef, bread (white and rye), cereal (all, including whole grains), milk, pork, rice (white), pasta, potatoes.

**Very acid-forming foods** include alcohol, artificial sweeteners (aspartame, saccharine), bread (whole wheat), cheese, chicken, coffee and black tea, eggs, fish (especially cod, herring and trout), nuts (especially peanuts and walnuts), processed (soft) cheeses, rice (brown), sausage.

**Alkaline-forming foods** include fruits, vegetables.

**Very alkaline-forming foods** include coconut water, dates, raisins, spinach.

**DOING A pH SELF-TEST**

It’s easy to test your pH balance on your own. I suggest that people test their first morning urine for seven days to determine their average pH. *Even better:* Test before dinner as well.

You can get pH test strips at health-food stores or pharmacies. They are inexpensive, around $10 for a roll. When exposed to urine, the strip will turn a color, which you then compare to the chart accompanying the strips on which colors are assigned a number.

If the average of your seven-day urinary pH levels is between 6.6 and 7, that’s good. Keep in mind that stress can make one acidic, as can some medications, toxins (such as mercury and lead) and intestinal infections (such as yeast or parasites).

If you find your readings are too acidic, increase your intake of fruits and vegetables until your average pH value is between 6.6 and 7. If you change your diet and do not see improvement, consult with a holistic doctor who can determine and treat internal imbalances contributing to your acidity.