

Acid Should Run Batteries, Not Bodies!



Ken Mueller

A pH Primer

If you've been trying to stay up with the latest findings in nutrition, then you probably have run into information about balancing the pH levels in the body. pH is the way science measures the relative acidity or alkalinity of substances. Lately, you may have noticed ads for various products which claim to "alkalinize" the body to improve body chemistry.

Of all the body fluids circulating within, metabolism keeps the tightest control on the blood chemistry. Your body's top three priorities for maintaining healthy blood are the regulation of temperature, blood sugar levels and blood pH. The body constantly expends significant metabolic energy trying to keep blood pH in the desired range (close to 7.4 pH).

Normally, the very act of breathing and staying hydrated with pure, (preferably slightly alkaline) water goes a long way in helping your body keep balanced pH levels throughout. A fresh, whole-foods diet, with plenty of mineral-rich fruits and vegetables, will help to supply the organic salts and minerals, such as sodium, calcium, magnesium and potassium, to further fuel the body's ability to maintain that ideal range of slightly alkaline blood.

Let's see what benefits you can expect if you have an ideal blood pH:

1. Red blood cells have a greater oxygen-carrying capacity to saturate body tissue and cells with life-giving oxygen. The correct ratio between CO₂ and oxygen exists. Oxygen is alkaline forming; carbon dioxide is acid forming.
2. Many single-celled, pathogenic organisms (viruses, bacteria, fungi) cannot survive or reproduce in blood that is at the ideal pH range. No colds or flu bugs!
3. If blood pH level is ideal, optimum absorption of micronutrients and macronutrients can take place.
4. Enzyme synthesis and enzymatic activity are at peak levels when in an ideal pH environment.
5. Cellular respiration, energy production, and waste removal can occur with greater efficiency, so you have more energy

This is not a complete list, but gives you an idea how important the blood pH is to optimal health maintenance.

The Challenges Imposed by Our Modern Lifestyle

Part of what makes some health food truly "healthy" are the alkaline-producing minerals contained in the product. Organic minerals, as found in fruits, vegetables and sea vegetables, are readily used by the body to buffer and neutralize any

tendency towards overly-acidic conditions. Meat products too, are chock-full of organic minerals, but concentrated protein foods tend to be less than ideal for alkalizing the body.

There is currently a debate among nutritionists. Stated simply, some feel that the inherent pH value of any given food will affect all individuals similarly. Others maintain that it's more of an interaction between the inherent qualities of the food itself and the unique metabolism of the person eating it. The latter position is called "metabolic typing," which states that we are not all the same in terms of our biochemical responses.

Wherever you stand on this issue, fresh, wholesome, vegetables of all sorts, grown in mineral rich soils, universally tend to balance the biochemistry of everyone.

Now contrast this with the typical mainstream diet consisting of fast foods, convenience foods, overly processed foods, junk foods, diets heavy with dairy and meat, sugary and starchy foods—all these tend to acidify the pH levels. Vegetables, especially raw, and low-sugar fruits are the only reliable food sources that virtually guarantee an alkalizing effect on body and blood pH for all.

The modern diet is not the only thing that causes many people to have problems keeping on

the healthy side of the pH equation. Stress, strenuous exercise and work, negative emotions, even negative thinking can skew the acid/alkaline balance. The environmental toxins we breathe in the air, pesticide residues and food additives entering the food supply, and the prescription drugs we ingest all have an impact.

And what about the beverage of choice we wash it all down with? Soda and coffee are the favorites. Soda, which contains both phosphoric and carbonic acids, with a pH of about 3.0, is 10,000 times more acidic than distilled water! You have to drink 20 cups of alkaline water to counter just one cup of soda—diet or not; caffeinated or not.

As you can see, all these influences in our American lifestyle make it a definite challenge to realize optimal pH levels without making considerable efforts to counter the acidifying habits most of us indulge in.

But don't worry, your body can compensate for most of the acid byproducts of the carefree, fast-paced lifestyle you throw at it—but often at a price. One of the ways it deals with excess acid is by creating cholesterol. The more acidic the body, the more cholesterol is made. LDL cholesterol, labeled the "bad cholesterol," can turn to plaque in the arteries. It is actually protective, saving the delicate arterial lining from the ravages of acids. Without the cholesterol, the acids could burn holes through the arteries!

Another way the body can adapt when we consistently indulge in strongly acidic foods and beverages (or vibes!) is to dump the residues into the urine.

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Food pH Chart

“cool & slow” “hot & fast”
Alkaline - Eat 70% Acid - Eat 30%

ALKALINE FORMING FOODS <small>FROM MOST TO LEAST</small>	ACID FORMING FOODS <small>FROM LEAST TO MOST</small>
<ul style="list-style-type: none"> • Raw Fruits & Fresh Juices: lime, raspberry, watermelon (most), cantaloupe, honeydew (more), pear, apple, peach, avocado, cherry, papaya (low), apricot, banana, blueberry, pineapple, raisin, grape, strawberry (low) • Citrus Fruits: tangerine (most), grapefruit (more), lemon (low), orange (lowest) • Raw Vegetables & Fresh Juices, Beans & Legumes: lentil, yam, onion, daikon, sea vegetables, burdock (most), kale, parsley, ginger root, broccoli, sweet potato (more), potato, bell pepper, mushroom, cauliflower, eggplant, pumpkin (low), brussel sprouts, beet, chive, squash, lettuce (lowest) • Whole Cooked Grains: oats, quinoa, wild rice (lowest) • Raw Nuts & Seeds: pumpkin (most), almonds, sesame, sunflower (low) • Sweeteners: molasses (more), rice syrup (low) • Vinegar: apple cider vinegar (low) • Frozen Fruits & Vegetables (more), Lightly Steamed Fruits & Vegetables (low) • Sprouted Grains (low) • Twig Tea (more), Green Tea (low) 	<ul style="list-style-type: none"> • Raw Fruits & Fresh Juices: dried fruits, figs & dates (lowest), plum, prunes, tomato (low), cranberries (more) • Vegetables, Beans & Legumes: spinach, kidney beans, string beans (lowest), tofu, pinto, white, navy, aduki, lima beans (low), peas, peanuts, carrots, chickpeas (more), soybean, carob (most) (overcooked fruits & vegetables are more) • Whole Cooked Grains: millet, brown rice (lowest), wheat, buckwheat, spelt (low), corn, rye (more), barley (most) • Dairy Products: cream, yogurt, eggs (lowest), milk, aged & soy cheese (low), processed cheese, ice cream (most) • Raw Nuts: pine nuts (low), pistachios & pecans (more), walnut, hazelnut, brazil nut (most) • White Meats: fish, venison (lowest), turkey (low), chicken (more), lobster (most) • Red Meats: lamb (low), pork, veal (more), beef (most) (meat cooked rare is less acid forming than well-done) • Herbs & Spices, Spicy Foods: garlic, hot peppers, horseradish... • Sweeteners: honey, maple syrup (low), sugar, cocoa (most) • Processed refined grains white flour, bread, pastries • Vinegar: rice vinegar (lowest), balsamic vinegar (low), white vinegar (most) • Refined Salt (more) • Fried Foods (most) • Coffee, Tea, Soft Drinks (most) • Alcohol, Tobacco (most) • Drugs, Medication (most)
<p>Editor's Note: <i>Body chemistry is highly complex. The body has an amazing ability to buffer excess acid, unless you overdo it. These are general recommendations. Every body is different. Experiment and see how you feel. Test your pH. Consider other factors, like overall stress (acidic) and medications. Be kind to your body and feed it mostly alkaline foods, especially greens. Use supplements. Limit the acidic foods and beverages.</i></p>	

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Your urine pH may often register an acidic 5.8 or lower. This would burn the urinary tract if excreted at this point, so still needs to be weakened or neutralized. Acid urine is neutralized in one of two ways: either alkaline minerals are added, or, if not available, ammonia is used. Ammonia, as synthesized by the body, is used only as an emergency backup when our alkaline reserve of minerals is deficient.

Your body counts on having a good reserve of alkaline minerals to buffer and neutralize acids in all of its systems. It relies on you eating plenty of fruits and vegetables to supply it with organic sodium (NOT the same as table salt) which replenishes the alkaline reserve to help keep your internal environment slightly alkaline. If organic sodium is in short supply, the body has a solution. The next best mineral to do the buffering is calcium. Your body really needs organic calcium, the kind that the body uses best to buffer acids—but also to build bones.

And what if organic calcium sources are lacking in the diet? Your body has found a reliable back-up system here as well. It will leach the calcium it needs from your bones! Somehow it must process and neutralize excess acids before they can be harmlessly eliminated. And if this situation persists, over time, osteoporosis (thinning of the bones) can set in.

Keep in mind, the body's only concern is to take care of what is going on right now in the present moment for immediate survival. It's up to you to do the long-range planning and imagine your prognosis for a healthy future. Nobody wants osteoporosis.

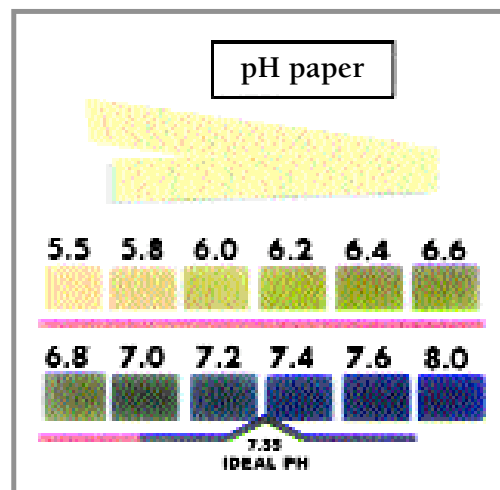
Keep Those Alkaline Reserves Pumped!

OK, so a person has urine that reeks of ammonia, has high cholesterol threatening to run off the charts, and is dangerously losing bone mass year after year, not to mention they are probably overweight because excess fat stores are needed to isolate and insulate their body tissues from, you guessed it, excess toxins and acids. Do you think we have a candidate here for correcting the acid-alkaline balance? Or is it more likely that they can solve this by adding some (highly acidic) prescription medications to their life? Nah...forget it. Put them on some greens!

An article this short can raise more questions on a topic of this scope than it can hope to answer. For instance, you may deduce that the acids under discussion are a bad thing. It is only when they are in excess that they begin to be detrimental. The body is alkaline by design, but acid-producing by function (metabolic functions and cell activity pro-

duce acid waste). So think of the acid-alkaline balance as another manifestation of the Yin and Yang the ancients understood as the great Tai Chi—they work in balance.

While 7.4 is considered by most the ideal blood pH level, mainstream medicine quotes a very wide range of what it classifies as normal pH. Bear in mind it lumps sick people with healthy individuals in these data points.



The Saliva pH Test

is a simple test you can do to measure your susceptibility to illness and disease. To perform the Saliva pH test, wait at least two hours after eating. Fill your mouth with saliva and swallow it twice, then the third time put some of your saliva on the pH paper. The pH paper should turn blue. This indicates that your saliva is slightly alkaline at a healthy pH of 7.4. If it's not blue, compare its color to those on the chart provided with your pH paper. If you are overly acidic, take the steps to get your body back into the optimal pH range.

The reader may get the impression that everything we do in our modern culture creates acidic havoc in our pH balance—and unfortunately a lot of that is true. Yet, there are many healthful activities, including good breathing, light exercise like walking, and raw-food eating, that add to pH harmony in the body. Count on this publication to highlight these areas.

Of the references cited below, two sources recommend a diet consisting of between 70–80% vegan as an alkaline promoting diet with at least 30% of that being raw, uncooked vegetables. The authors do not promote a strictly vegetarian diet. The second source recommends eating according to the *Metabolic Typing Diet*. In practice, there's usually quite a gap between the ideal and what's real. That's why it's smart to add quality food supplements to help make up the difference. ■

Ken Mueller is a freelance writer and nutrition research specialist. For more information on balancing your pH through nutrition, visit SuperGreensRule.com.

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