

The Significance of Your First Morning Urine pH and Its Proper Measurement

Your first morning urine pH gives a good indicator of the body's mineral reserve and its acid/alkaline state. The body routinely uses overnight rest time to excrete excess acids. This capacity varies based on toxin load and individual ability to make energy, to make toxins inactive, and to excrete them.

- **How does one monitor the pH?**

To test your pH, follow these simple steps:

1. Obtain a packet of pH (Hydrion™) test paper with a test range of 5.5 to 8. Your local dispensary or pharmacist should have this item or be able to order it for you.
2. First thing in the morning, just before your first urination, open the test tape packet and cut off two or three inches of the paper tape. Now wet the test tape with urine. For best results, a 6-hour to 8-hour period of rest prior to pH testing is needed.
3. As the tape is moistened with urine it will change color. The color relates to the urine's acid or alkaline state and ranges from yellow to dark blue. Match the color of your test strip with the color chart on the back of the test tape packet.
4. Jot down the number that corresponds to the color of the urine-moistened tape has taken on. This can be done daily or periodically based on your needs as recommended by your physician.

- **How do I know if I am acidic or alkaline?**

Any number below 7.0 means that your urine is on the acid side. The lower the number, the more acid the condition. For example, a number of 5.0 indicates 10 times more acidity than 6.0. A number of 7.0 indicates the neutral state, neither acid or alkaline. Ideally, your first morning urine pH should be in a pH range of 6.5 to 7.5. When your first morning urine is neutral or just slightly acidic, this indicates that your overall cellular pH is appropriately alkaline and that the small amounts of acids built up from normal metabolism have been easily concentrated for excretion. The cells of your body function best in an alkaline state.

- **What if my urine pH is below 6.5 ?**

If your readings fall below 6.5, then you should begin changes aimed at alkalinizing your diet. Listed on page 13 are simple modifications that will help alkalinize your system. In the beginning, because of the acid-forming tendency of the standard American diet, you may well have low pH readings. Occasionally, you may find a 7.5 to 8.0 reading; this is acceptable. If your pH readings are consistently greater than 7.5, this occurrence represents a "false alkalinity" and indicates a catabolic state involving tissue breakdown.

Guidelines for Developing Your Alkaline Diet

Examine the chart on page 14 entitled, Food and Chemical Effects of Acid/Alkaline Body Chemical Balance. If you are in an acid state, the first step is to eat more alkalizing vegetables, fruits, spices, and lentils. Strive for two cups of alkalizing vegetables at both lunch and dinner. Enjoying a breakfast of alkaline fruits or oatmeal while limiting high protein foods will also go a long way toward reducing your acidity. In addition, the following simple changes are especially helpful for quickly alkalizing yourself:

- Drink the juice of one-half a lime, lemon, or a teaspoon of apple cider vinegar in 6-8 ounces of water a few times during the day. You may think this would make you more acidic. Not so! These substances metabolize to an alkaline residue due to the dicarboxylic acids that the body uses to make energy in a way that gives off an alkaline (bicarbonate) product. See the acid-alkaline effects on body chemistry chart on page 14 for more examples.
- Add lentils, ginger, yams, and sweet potatoes to your diet on a regular basis. These foods will give you an alkaline boost.
- Make it a point to eat daily at least two cups of alkalizing greens (kale, mustard and turnip greens, collards, or endive). Lettuce is fine to eat, but not in place of alkaline greens. Grated daikon radish is a wonderful alkalizing condiment.
- Add miso and seaweed to soups and other dishes as both a great digestive aid and as an alkalizer.
- Eat more of the alkalizing grains like oats, quinoa, and wild rice.
- Enjoy liberal amounts of fruits, especially watermelon.
- If you suffer from gas, bloating, or weak digestion, eat cooked fruit and small amounts of fresh juices.
- Certain supplements like a fully buffered ascorbate (vitamin C), soluble (ionized) magnesium, and L-Glutamine [with Pyridoxal-alpha-ketoglutarate (PAK)] will also alkalize you and should be used in doses as needed based on your metabolism. We have found that an optimum dose of fully buffered ascorbate with a combination of calcium, magnesium, potassium, and zinc is a health-promoting way to alkalize, energize, and enhance metabolism of toxins at the same time.

Be patient and persistent. Remember, your pH indicates your reserve of alkaline minerals. An alkaline pH indicates good reserves of the enzyme-activating alkaline minerals. It can take time to build up these reserves. It may have taken years to become depleted. Do not be discouraged with a slow movement toward the ideal alkaline state—a first morning pH of 6.5 to 7.5.

The Importance of an Alkaline Diet

The internal environment of our bodies is maintained at a pH of just about 7.0. This means our internal environment is alkaline. Maintenance of this state is a dynamic, not static, process mediated moment to moment by numerous reactions that produce acid products. Our internal chemical equilibrium is primarily controlled by our lungs, kidneys, intestines, and skin. For necessary reactions and functions to occur, our body must maintain a proper pH. Adequate alkaline reserves are necessary for optimal pH adjustment. The body needs oxygen, water, and acid-buffering minerals to accomplish the pH buffering, while also briskly eliminating waste products.

When an alkaline environment is maintained in the body, metabolic, enzymatic, immunologic, and repair mechanisms function at their best. The acid-forming metabolites of stress and inflammation and of high fat and high protein foods are adequately and effectively neutralized only when sufficient mineral-buffering reserves are present. Mineral-buffering reserves are the gift that alkaline-forming foods give to our body. A diet that is predominantly alkaline forming is essential to the maintenance of sustained health.

Most vegetables and fruits contain higher proportions of alkaline-forming elements than other foods. These foods promote a more alkaline environment in the body. For example, commercial corn, barley, soybeans, and legumes are acid forming. This may reflect breeding selection in the last fifty years that favored higher carbohydrate and fat content. Traditional organically or biodynamically grown forms of these grains and grasses may well be much less acid forming. Surprisingly, despite their pronounced acid flavor, citrus fruit and thubarb form alkaline residues. This is because their distinctive organic acids like citric, succinic, fumaric, and malic (Krebs' DCA or dicarboxylic acid) metabolize to water and alkalizing bicarbonate, while producing energy (ATP) inside the cell.

Body balance, in terms of acid-alkaline state, is a pH of 7.450 for blood in the arteries and 7.350 for blood in the veins. Acid-alkaline equivalence is a pH of 7.000. Thus, a healthy body means a pH that is slightly alkaline. This means there are more buffering mineral receptors for electrons than acid-forming electron donors.

In foods containing large amounts of protein and fat, the acid-forming elements predominate over the alkaline-forming elements. Thus, cow's milk

and related dairy products are acid-forming, although goat and sheep milk/cheeses (with less fat and protein) produce less acid. The one dairy product exception is clarified butter (known as "ghee" in Indian cookery), which has alkalizing short chain fats known as butyrates and caprylates. The butyrates and caprylates present in ghee are also thought to promote healthy bacterial growth in the intestines, promote repair of the intestine wall, and suppress pathogen growth of some yeasts and parasites if they are present.

Whole grains give an acid reaction disproportionate to their protein content due to the extra phosphorus present in the phytates. The phosphate content of commercial grains may be higher than traditional, organic, or biodynamic sources in part because of fertilizer differences and plant strain selection. Although most fruits have an alkaline effect, some such as prunes, plums, and cranberries make a net contribution of acid to the body since they contain organic acids that are not metabolized by the body. Nuts such as coconuts, almonds, and chestnuts are alkaline forming, while others like peanuts (a legume) and walnuts yield net acid. Highly refined and processed foods consisting chiefly of fats, sugars, and simple starches, along with protein-rich foods are metabolically acidifying.

The chart on the back of this page titled, *Food & Chemical Effects on Acid/Alkaline Body Chemical Balance*, presents the message that, in general, fruits, vegetables, lentils, seeds, sprouts, roots, and tubers are healthfully alkalizing, while grains, grasses, fowl, fish, seafood, dairy products, meats, and most beans are acidifying. Here is a way to simplify this and make it memorable. If it comes from under or near the ground, it is likely to be alkalizing. If it comes from on or high above the ground, it is likely to be acid forming.

The specifics of how each food was categorized on this chart are based on a formula wherein protein, fat, carbohydrate, mineral, and other specific factors were taken into account. More specifically, the basic neutral and acidic end-products of protein, fat, and carbohydrate digestion were calculated, and the content of minerals and special factors were also accounted. A computation was used to determine the relative degree of acid- or alkaline-forming effects of the food on body chemistry. Based on this determination, the items were placed in the appropriate acid or alkaline group on the chart.

Reference: Jaffe R and Donovan P. *Your Health: A Professional User's Guide*. Sterling, Va: Health Studies Collegium, 1993.

Food & Chemical Effects on Acid / Alkaline Body Chemical Balance

Most Alkaline	More Alkaline	Low Alkaline	Lowest Alkaline	Food Category	Lowest Acid	Low Acid	More Acid	Most Acid
• Baking Soda	Spices/Cinnamon Valerian Licorice • Black Cohash	• Herbs (most): Arnica, Bergamot, Echinacea, Chrysanthemum, Ephedra, Feverfew, Goldenseal, Lemongrass	White Willow Bark Slippery Elm Artemesia Annua	Spice/Herb	Curry	Vanilla Sewia	Nutmeg	Pudding/Jam/Jelly
Sea Salt Mineral Water	• Kombucha	• Green or Mu Tea	<i>Sulfite</i> Ginger Tea	Preservative Beverage	<i>MSG</i> <i>Kona Coffee</i>	<i>Benzoate Alcohol</i> Black Tea	<i>Aspartame Coffee</i>	<i>Table Salt (NaCl)</i> Beer; 'Soda' Yeast/Hops/Malt Sugar/Cocoa White/Acetic Vinegar
• Umeboshi Plum	Molasses Soy Sauce	Rice Syrup Apple Cider Vinegar	• Sucanat • Umeboshi Vinegar	Sweetener Vinegar	Honey/Maple Syrup Rice Vinegar	Balsamic Vinegar	<i>Saccharin</i>	
		• Sake	• Algae, Blue-Green • Ghee (Clarified Butter) Human Breast Milk	Therapeutic Processed Dairy	Cream/Butter	<i>Anthistamines</i> Cow Milk	<i>Psychotropics</i> • Casein, Milk Protein, Cottage Cheese New Cheese Soy Milk	<i>Processed Cheese</i> Ice Cream
		• Quail Egg	• Duck Egg	Cow/Human Soy Goat/Sheep Egg	Goat/Sheep Cheese	Aged Cheese Soy Cheese Goat Milk		
				Meat Game Fish/Shell Fish Fowl	Chicken Egg Gelatin/Organs • Venison Fish Wild Duck	Lamb/Mutton Boar/Elk/•Game Meat Shell Fish/Mollusks Goose/Turkey	Pork/Veal Bear • Mussel/Squid Chicken	Beef Lobster • Pheasant
				Grain Cereal Grass	• Triticale Millet Kasha • Amaranth Brown Rice	Buckwheat Wheat • Spelt/Teff/Kamut Farina/Semolina White Rice	Maize Barley Groat Corn Rye Oat Bran	Barley <i>Processed Flour</i>
Pumpkin Seed	Poppy Seed Cashew Chestnut Pepper	Primrose Oil Sesame Seed Cod Liver Oil Almond • Sprout	Avocado Oil Seeds (most) Coconut Oil Olive/Macadamia Oil Linseed/Flax Oil	Nut Seed/Sprout Oil	Pumpkin Seed Oil Grape Seed Oil Sunflower Oil Pine Nut Carota Oil	Almond Oil Sesame Oil Safflower Oil Tapioca • Seitan or Tofu	Pistachio Seed Chestnut Oil <i>Lard</i> Pecan Palm Kernel Oil	• <i>Cottonseed Oil/Meat</i> Hazelnut Walnut Brazil Nut <i>Fried Food</i>
<i>Hydrogenated Oil</i>				Bean Vegetable Legume Pulse Root	Spinach Fava Bean Kidney Bean Black-eyed Pea String/Wax Bean Zucchini Chutney Rhubarb	Split Pea Pinto Bean White Bean Navy/Red Bean Aduki Bean Lima or Mung Bean Chard	Green Pea Peanut Snow Pea Legumes (other) Carrot Chick Pea/Carbanzo	Soybean Carob
Lentil Broccoli • Seaweed: Norikombu/Wakame/Hijiki	Kohlrabi Parsnip/Taro Garlic Asparagus Kale/Parsley Onion/Miso • Daikon/• Taro Root • Sea Vegetables (other) • Burdock/• Lotus Root Sweet Potato/Yam	Potato/Bell Pepper Mushroom/Fungi Cauliflower Cabbage Rutabaga • Salsify/• Ginseng Eggplant Pumpkin Collard Greens	Brussel Sprout Beet Chive/Cilantro Celery/Scallion Okra/Cucumber Turnip Greens Squash Lettuce Jicama	Citrus Fruit				
Lime Nectarine Persimmon Raspberry Watermelon Tangerine Pineapple	Grapefruit Cantaloupe Honeydew Citrus Olive • Dewberry Loganberry Mango	Lemon Pear Avocado Apple Blackberry Cherry Peach Papaya	Orange Apricot Banana Blueberry Pineapple Juice Raisin, Currant Grape Strawberry		Cocconut Guava • Pickled Fruit Dry Fruit Fig Persimmon Juice • Cherimoya Date	Plum Prune Tomato	Cranberry Pomegranate	

• Therapeutic, gourmet, or exotic items

Italicized items are NOT recommended.