

## Acid/Alkaline Balance Monitoring and Adjustment

One of the most important factors in achieving and maintaining good health is proper acid/base balance; known as the "pH." pH is a measure of the amount of acid in a solution. It ranges from "1" which is the most acidic to "14" which is the most alkaline or basic (the opposite of acid.) Neutral is "7.0." The blood should be slightly alkaline (7.2-7.4) and the urine slightly acidic. Testing the urine pH is the easiest way to assess one's body pH. The first voided urine in the morning (the most accurate time to test) should be 6.5-6.8. After eating, the stomach secretes hydrochloric acid into its lumen. To do this, acid is removed from the blood temporarily thereby raising the pH of the urine produced after the meal. This is known as the post-prandial (after eating) "alkaline tide." The urinary pH may rise to 7.0.

Symptoms of being overly acid are feeling heavy and stiff, acid indigestion or acid reflux, heavy breathing with minimal exertion, and cold symptoms. Symptoms of being overly alkaline are feeling washed-out and lifeless, limp, no appetite, and no energy.

### TREATMENT:

- If your urinary pH is too low (less than 6.5), you are too acid. The primary treatment and prevention is to eat a diet that contains 80% alkaline forming foods, especially green vegetables and fresh fruits. Lemon or lime in water is a key one.
  - Supplements:
    - i Magnesium citrate or Krebs- 500-1000 mg/day.
    - ii Potassium citrate or Krebs- 100-400 mg/day. (caution with renal failure)
- If your morning pH is too high (7.0 or more), eating acid forming foods is not the answer. This only promotes toxicity. Use the following supplements or herbs/spices:
  - Supplements:
    - i Betaine HCl (hydrochloric acid) – Start at just one capsule or tablet preferably at the beginning of the meal. The dose may be increased as tolerated (may cause a warm sensation in the stomach.) After using for a day or two, the dose may need to be decreased or stopped altogether to avoid excess acidity.
    - ii Ascorbic Acid (not buffered ascorbates) – May take 1,000-8,000 mg/day as needed and tolerated.
    - iii If the above are not available, one may take one or more teaspoons of apple cider vinegar in water.
    - iv Black pepper and horseradish especially with protein to help digestion.

| Alkaline Forming Foods   |                        |                              | Acid Forming Foods |                   |                    |
|--------------------------|------------------------|------------------------------|--------------------|-------------------|--------------------|
| VEGETABLES               | FRUITS                 | OTHER                        | FATS & OILS        | NUTS & BUTTERS    | DRUGS & CHEMICALS  |
| Alfalfa                  | All Berries            | Alkaline Antioxidant Water   | Avocado Oil        | Brazil Nuts       | Aspartame          |
| Asparagus                | Apple                  | Apple Cider Vinegar          | Canola Oil         | Cashews           | Chemicals          |
| Barley Grass             | Apricot                | Banchi Tea                   | Corn Oil           | Peanut Butter     | Drugs, Medicinal   |
| Beets                    | Avocado                | Bee Pollen                   | Flax Oil           | Peanuts           | Drugs, Psychedelic |
| Broccoli                 | Banana (high glycemic) | Dandelion Tea                | Hemp Seed Oil      | Pecans            | Herbicides         |
| Brussel Sprouts          | Cantaloupe             | Fresh Fruit Juice            | Lard               | Tahini            | Pesticides         |
| Cabbage                  | Cherries               | Ginseng Tea                  | Olive Oil          | Walnuts           | ALCOHOL            |
| Carrot                   | Currants               | Green Juices                 | Safflower Oil      | ANIMAL PROTEIN    | Beer               |
| Cauliflower              | Dates/Figs             | Green Tea                    | Sesame Oil         | Beef              | Hard Liquor        |
| Celery                   | Grapefruit             | Herbal Tea                   | Sunflower Oil      | Carp              | Spirits            |
| Chard                    | Grapes                 | Kombucha                     | FRUITS             | Clams             | Wine               |
| Chlorella                | Honeydew Melon         | Lecithin Granules            | Cranberries        | Fish              | BEANS & LEGUMES    |
| Collard Greens           | Lemon                  | Mineral Water                | GRAINS             | Lamb              | Almond Milk        |
| Cucumber                 | Lime                   | Organic Milk (unpasteurized) | Amaranth           | Lobster           | Black Beans        |
| Dandelions               | Nectarine              | Probiotic Cultures           | Barley             | Mussels           | Chick Peas         |
| Dulce                    | Orange                 | Veggies Juices               | Buckwheat          | Oyster            | Green Peas         |
| Edible Flowers           | Peach                  | SPICES/SEASONINGS            | Corn               | Pork              | Kidney Beans       |
| Eggplant                 | Pear                   | All Herbs                    | Hemp Seed Flour    | Rabbit            | Lentils            |
| Fermented Veggies        | Pineapple              | Chili Pepper                 | Kamut              | Salmon            | Lima Beans         |
| Garlic                   | Tangerine              | Cinnamon                     | Oats (rolled)      | Scallops          | Pinto Beans        |
| Kale                     | Tomato                 | Curry                        | Quinoa             | Shrimp            | Red Beans          |
| Kohlrabi                 | Tropical Fruits        | Ginger                       | Rice (all)         | Tuna              | Rice Milk          |
| Lettuce                  | Watermelon             | Miso                         | Rice Cakes         | Turkey            | Soy Beans          |
| Mushrooms                | PROTEIN                | Mustard                      | Rye                | Venison           | Soy Milk           |
| Mustard Greens           | Almonds                | Sea Salt                     | Spelt              | PASTA (WHITE)     | White Beans        |
| Onions                   | Chestnuts              | Tamari                       | Wheat              | Noodles           |                    |
| Parsnips (high glycemic) | Chicken Breast         | ORIENTAL VEGETABLES          | Wheat Cakes        | Macaroni          |                    |
| Peas                     | Cottage Cheese         | Daikon                       | DAIRY              | Spaghetti         |                    |
| Peppers                  | Eggs (poached)         | Dandelion Root               | Cheese, Cow        | OTHER             |                    |
| Pumpkin                  | Flax Seeds             | Kombu                        | Butter             | Distilled Vinegar |                    |
| Rutabaga                 | Pumpkin Seeds          | Maitake                      | Cheese, Goat       | Potatoes          |                    |
| Sea Veggies              | Squash Seeds           | Nori                         | Cheese, Processed  | Wheat Germ        |                    |
| Spirulina                | Tempeh (fermented)     | Reishi                       | Cheese, Sheep      |                   |                    |
| Sprouts                  | Tofu (fermented)       | Sea Veggies                  | Milk               |                   |                    |
| Squashes                 | Whey Protein Powder    | Shitake                      |                    |                   |                    |
| Watercress               | Yogurt                 | Umeboshi                     |                    |                   |                    |
| Wheat Grass              | SWEETENERS             | Wakame                       |                    |                   |                    |
|                          | Ki Sweet               |                              |                    |                   |                    |
|                          | Stevia                 |                              |                    |                   |                    |