The Importance of an Alkaline Diet

By Dr. Ritamarie Loscalzo

The internal environment of your body is maintained at a pH just above 7.0. Your blood pH must be maintained within a very narrow range or serious illness and death can result.

This means that your internal environment is slightly alkaline. Your enzymatic, immunologic, and repair mechanisms all function their best in an alkaline environment. Your metabolic processes (the processes of living, tissue repair, and the metabolism of food) produce a great deal of acid. In order to maintain your internal alkaline state, you need oxygen, water, and acid-buffering minerals available as you are eliminating waste products.

What Creates Acidity in Your Body:

For example, when you exercise or move you produce lactic acid and carbon dioxide. Lactic acid is by its nature acid, and the carbon dioxide becomes acidic, turning into carbonic acid in water. Digestion of foods generates acids. For example, phosphoric acid and sulfuric acid are produced from the metabolism of the phosphorus and sulfur contained in many foods, such as, meats, grains, and beans. Immune system responses, such as allergies and hypersensitivities, directly and indirectly generate substantial amounts of acidic products.

Many factors relating to lifestyle and environment also influence acid-alkaline balance. For example, when you are under tremendous stress, your acidity will likely increase because of the demands on your cells to become more active. Chronically hectic schedules, inadequate sleep and rushed, imbalanced meals can all contribute to this unhealthful condition. An underlying metabolic acidity is a common denominator among, and a likely contributing factor to, all degenerative and autoimmune diseases.

An acid condition has several adverse effects on cell metabolism including: impaired energy production; fluid accumulation and edema; and a likely increase in free radical production.

How Your Body Maintains an Alkaline State:

The countless chemical reactions necessary for life can only occur within a very specific pH range, thus the body has many checks and balances to maintain pH within a narrow range. Re-establishment of the health-promoting alkaline state is essential to the regeneration of your immune competence and your overall health.

To regain the life-supporting alkaline state, acids from all sources must be buffered or neutralized through combination with alkaline minerals. The alkaline minerals include calcium, magnesium, potassium, sodium, chromium, selenium, and iron. The most readily available pool of alkaline minerals is in the bone, and as your body works to maintain optimal blood pH, minerals are depleted from the bone, leading to increased risk of osteoporosis.

Dr. Susan Brown, leading researcher in the area of osteoporosis, and author of the book “Better Bones, Better Body”, has found that the single most important factor in changing your bone density and decreasing your osteoporosis risk is maintaining optimal pH through an alkaline diet and lifestyle.

When your dietary consumption patterns generate excessive acidic by-products, and provide insufficient buffering capacity, your body buffering mineral pools can be depleted and the intracellular environment becomes acidotic. Many organs and systems, especially the kidneys, adrenals and lungs, play important roles in maintaining proper pH.

The Role of Your Diet:

Diet, however, is especially important. That's why a diet that is predominantly alkaline forming is essential to the maintenance of your good health. When you eat a balanced whole foods diet, your net acid/alkaline balance is maintained in proper proportion.

Foods that are high in protein, including milk, meat, and even whole grains, are acid forming. Most fruits are alkaline-forming but some, like prunes, plums, and cranberries, are acid-forming because your body can't break down the types of acids they contain. Highly refined foods, such as oils, sugars, soft drinks, and simple starches are acid forming.

If you are like most people in our society, you probably consume a very imbalanced diet high in acid-forming foods. This imbalanced diet pushes you towards an acid state, and your body responds by taking calcium and other alkalinizing minerals from the blood, bone and tissues.

The absorption of alkalinizing mineral salts from your diet or supplement program depends upon proper digestion in your stomach and upper small intestine. When long-term pH trends indicate depletion of alkaline reserves, it is also important that the status of your digestive function be assessed. Furthermore, overgrowth of certain abnormal bacteria can impair the lining of your stomach, and food allergy and other factors can impair the lining of your upper small intestine. These conditions can be harmful to your digestion and absorption of key nutrients. It is sometimes helpful to fortify your system with supplements of some or all of these alkalinizing mineral compounds when your body has a tendency toward acid accumulation.

Using the Acid/Alkaline Food Chart:

The table of acid/alkaline foods is a guide to show you what foods will help create a more alkaline, and therefore healthier, environment for your body. Your diet should be weighted in favor of the foods on the left-hand side of the chart. Usually, to regain an alkaline environment, 80-90% of your foods should be chosen from the alkaline side of the chart. Once you achieve optimal pH, you can usually maintain it by eating 60-80% of the diet as alkaline forming foods.

A good way to measure your average body pH is to measure the pH of your first morning urine. When your first morning urine is between 6.5 (slightly acidic) and 7.5 (slightly alkaline), it indicates that the overall cellular pH is appropriately alkaline. The best time to check pH is in the morning. Urine pH is tested on a specimen of your first morning urination.

You can also test your urine pH later in the day, and this will indicate the impact of foods and supplements which you have taken earlier in the day. You should check your morning saliva pH immediately after arising, before you think about or eat your breakfast, and while in a calm state of mind. After a meal, your saliva should normally become alkaline. Checking saliva pH after a meal can indicate whether or not this normal mechanism is intact. Optimal range for first morning saliva pH is 6.8 to 7.2.

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

• Therapeutic, gourmet, or exotic items *Italicized items are NOT recommended.*

Prepared by Dr. Russell Jaffe, Fellow, Health Studies Collegium. Reprints available from ELISA/ACT Biotechnologies, 14 Pidgeon Hill, #300, Sterling, VA 20165. Sources include USDA food data base (Rev 9 & 10), *Food & Nutrition Encyclopedia*; *Nutrition Applied Personally*, by M. Walczak; *Acid & Alkaline* by H. Aihara. Food growth, transport, storage, processing, preparation, combination, & assimilation influence effect intensity. Thanks to Hank Liers for his original work. [Rev 6/01]

Alkalizing Special Foods

Green Water

Ingredients:

- 1 handful leafy green vegetables (any variety such as dark green/red lettuces, kale, spinach, parsley, etc.)
- fresh ginger root, lemon, mint (optional additions)
- water as needed for blending

Directions:

1. Place a handful of leafy green vegetables in the blender.
2. Cover with water and blend until vegetables are completely puréed. Add enough water to fill the blender and blend until vegetables are completely dissolved.
3. Pour liquid into a 1 1/2 to 2 quart container and fill with water.
4. Shake well before drinking.
5. Sip throughout the day in place of water.
6. Add fresh ginger root, lemon, or mint to the blend for a nice flavor. The resulting beverage should be a pale green, translucent color.

Personal Note: This is a good way to start including blended greens in your diet. It is a very light, mild tasting beverage which can be enhanced by the addition of lemon/lime juice or herbs and spices.

Lemony Mint Energy Drink

Ingredients:

- 1 - 2 medium apples
- 1 lemon, juiced
- 1 romaine lettuce heart
- 1/2 medium avocado (optional)
- 1 handful fresh mint leaves or 2 tablespoons dried mint
- 2 cups water

Directions:

1. Blend ingredients in a blender until creamy.
2. Add extra water if you prefer a thinner soup.
3. Adjust the lemon and mint to taste.

Personal Note: Make up your own version. Use different herbs. Add other green vegetables. I have made it without the avocado, without the apple and without the mint. I always find it refreshing and very energizing.

I have made a version of this that is basically a blended salad. Lots of lettuce, tomato, cucumber, celery, flax oil, apple cider vinegar and herbs.

It is an easy way to eat lots of fresh, raw vegetables.

Creamy Green Soup (Cooked Version)

Ingredients:

- 1 bunch of broccoli
- 1 zucchini
- 1 stalk of celery
- 1/2 - 1 medium sized onion
- 1 avocado or 1/4 cup coconut meat (fresh or from jar)
- 1 bunch of green leafy veggies such as spinach, chard, collards, kale or dandelion greens
- water for steaming

Directions:

1. Steam veggies until just tender and place in blender along with steaming water. Be careful not to burn yourself.
2. Blend until creamy.
3. Add avocado and blend again.
4. Add additional water if too thick.
5. Add a pinch of sea salt and a tablespoon of flax oil. Season to taste with basil, cilantro, or other favorite herbs.

Personal Note: Adding sweet potatoes and squash give the soup a sweeter flavor.

A.M. Saliva and Urine pH Results

The pH of the saliva and the urine, taken in the morning upon first voiding of the day can reveal much about the metabolic activity of the body. The following are optimal values for both the a.m. saliva and the a.m. urine:

Saliva: 6.8 to 7.2

Urine: 6.4 to 6.8

Please use the pH paper to record the **first morning's saliva pH and urine pH** in the chart below. Wait at least one hour and record a **second urine pH reading**. Eating during this time is allowed.

Date	Morning Saliva pH	1st Morning Urine pH	2nd Urine pH