



## Acid Alkali Balance

Kimbriki Eco House & Garden

### Acid Alkali Balance - The Ideal Diet\*

### Understanding pH level and the link to disease

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Health & Longevity – Dr David Collison

#### How Important is the Acid/Alkaline Balance?

The absolute foundation of sound nutrition is to maintain the correct acid /alkali balance in the body. If we have the correct acid /alkali balance, then much of our health, as far as nutrition is concerned, falls into place.

#### Disease and Acidosis

A significant number of physical problems and diseases can be caused by acidity. Today, in the early 21<sup>st</sup> century, the vast majority of the populace in the industrialised western nations suffers from problems caused by acidification. This is because both modern lifestyle and diet promote acidification of the body's internal environment.

Acidosis forces the body to borrow minerals, including calcium and magnesium, from vital organs and bones in order to buffer (neutralise) the acid and safely remove it from the body. Because of this, the body can suffer severe and prolonged damage due to high acidity (acidosis) – a state that may go undetected for years. For example, osteoporosis does not occur overnight. It is a gradual process of demineralisation that takes place over decades, entirely unseen or undetected without special investigations (bone density studies), or until a fracture occurs.

In the literature, a number of symptoms, conditions and diseases have been linked to, and thought to be caused by, acidosis. The following includes some of these problems:

- Aching muscles
- Bladder conditions
- Cardiovascular disease
- Chronic fatigue
- Cracks at the corner of the mouth
- Depressive tendencies
- Diabetes
- Dry skin
- Easily stressed
- Energy – low, lack of

- Excess stomach acid
- Eyes and eyelids inflamed
- Free radical damage and resultant complications, including cancer
- Gastritis
- Gingivitis and sensitive gums
- Hair – dull, split-ends and falling out
- Headaches
- Hormonal problems
- Immune deficiency
- Indigestion and poor elimination
- Infections – tendency towards
- Joint pains
- Kidney stones
- Leg cramps
- Libido – low
- Mouth ulcers
- Nails – thin and easily split
- Obesity
- Osteoporosis
- Pallor, pale complexion
- Premature aging
- Temperature – tendency to low
- Weight gain
- Yeast and fungal overgrowth.

### **What is pH?**

pH (potential of hydrogen) is a measure of the acidity or alkalinity of a solution. It is a measure of the hydrogen-ion concentration. It is measured on a scale of 0-14. The lower the pH the more acidic is the solution, the higher the pH the more alkaline (or base) is the solution. When a solution is neither acid nor alkaline, it has a pH of 7, which is neutral. It is a logarithmic scale.

Water is the most abundant compound in the human body, comprising some 70% of the body. Water is neutral with a pH of 7.0.

The body has an acid/alkaline (or acid/base) ratio, the pH, which is a balance between positively charged ions (acid forming) and negatively charged ions (alkaline forming). The pH is slightly alkaline, 7.4, and the body continually strives to maintain this pH. When this balance is compromised (nearly always a drop in pH, i.e. a move towards acidity), many problems can occur.

### **An Essential for Healing**

Total healing of chronic illness only takes place when and if the blood (and hence the whole body) is restored to a normal, slightly alkaline, pH.

The human blood must stay in a narrow pH range (7.35-7.45). Below this range, or much less commonly and unusually above this range, means symptoms and disease.

### **What Causes Disease?**

Theodore A. Baroody, in his book 'Alkalize or Die' says: "the countless names of illnesses do not really matter. What does matter is that they all come from the same root cause --- too much tissue acid wastes in the body."

## What Causes Acidification (a drop in pH)?

- 1) An acid forming diet (see below).
- 2) Stimulants such as tobacco, coffee, black tea, alcohol. These are extremely acidifying.
- 3) Stress – especially emotional (including anger, fear, and jealousy), overwork or any cause of stress.
- 4) Physical activity – both insufficient and excessive amounts.
- 5) Toxic overload – including chemicals of all forms. For example, in our foods, there are chemicals deliberately added such as preservatives, colouring, flavourings, emulsifiers etc, and chemicals “accidentally” present like pesticide and herbicide residues. Environmental pollutants are in the air we breathe and the water we drink.
- 6) Immune reactions or any process which deprives the cells of oxygen or other nutrients. The higher the pH reading, the more alkaline and oxygen rich the fluid is. Hydrogen ions (H<sup>+</sup>) are acid, hydroxyl ions (OH<sup>-</sup>) are alkaline. Water is H<sub>2</sub>O, or H<sup>+</sup>OH<sup>-</sup> equal in amounts, and thus neutral or pH7. Acid means excess of H<sup>+</sup> over OH<sup>-</sup> and alkaline means the opposite or more OH<sup>-</sup> i.e. more oxygen. To give one example of the importance of adequate oxygenation of the tissues and blood, there are two factors that are always present with cancer, no matter what else may be present. These two factors are acid pH and lack of oxygen. The cancer cell has acid pH and lack of oxygen. Cancer cells cannot survive in an oxygen rich (alkaline) environment.

The proper alkalinity pH of the blood (7.35 – 7.45) is critical for the overall health of the body. In other words ... alkalize or die.

Remember that the pH number is logarithmic – it is an exponent number of 10. Therefore, a small difference in pH translates to a big difference in the number of oxygen or OH ions (OH<sup>-</sup>). A different of 1 in pH value means 10 times the difference in the number of OH ions. Blood with a pH value of 7.45 contains 64.9% more oxygen than blood with a pH value of 7.3.

Research shows that unless the body's pH level is slightly alkaline, the body cannot heal itself. Diseases cannot survive in an alkaline state and yet they thrive in an acidic environment.

A move from the ideal acid/alkaline balance in the body (7.35 – 7.45) towards acidosis (a lowering of the pH – the blood/body does not have to have a pH less than 7 to be acidic – 7.35 is acidic compared to 7.40) will:

- Decrease the body's ability to absorb minerals and other nutrients
- Decrease the energy production in the cells
- Decrease the body's ability to repair damaged cells
- Decrease the body's ability to detoxify, e.g. heavy metals
- Make tumour (cancer) cells thrive
- Make the body more susceptible to fatigue
- Make the body more susceptible to illness.

## Why is Acidosis so Common?

The reason acidosis is common in our society is mostly due to the typical Australian (and western) diet. As indicated above, there are multiple things that contribute to acidosis – however diet is the most important contributor, especially as it is able to be modified to give the correct acid/alkali balance for health and disease prevention.

The typical western diet is far too high in acid forming animal products like meats, chicken, fish, eggs and dairy and far too low in alkaline producing foods like fresh fruit and fresh vegetables. Additionally, the typical western diet is far too high in acid forming processed foods like white flour and sugar and acid producing beverages like coffee and all soft drinks (some, like Coca Cola, with a pH of 2.8, being extremely acidic). Pharmaceutical drugs are also acid forming and far too many are consumed, often unnecessarily. Artificial chemical sweeteners like NutraSweet, Equal or Aspartame are poisonous and extremely acid forming.

## What To Do

One of the best things we can do to correct an overly acid body is to clean up the diet and lifestyle.

To maintain health and to prevent disease and to aid in recovery from existing illness, the diet should consist of 75%-80% alkaline forming foods. This means that up to 20%-25% can come from acid forming foods, ideally from the low or medium acid forming foods (see the tables below).

In general terms:

- Alkaline forming foods include most fruits, most vegetables (especially greens), some beans, lentils and some nuts.
- Acid forming foods include red meats (beef, lamb, pork), poultry, fish, dairy products (especially cheeses), most grains (especially if refined) and processed foods.

However, as will be seen below, some alkaline foods are more alkaline than others and likewise, some acid foods are more acid than others.

### Foods: Are they Acid or Alkaline Forming?

What is meant when we say a food is either acid or alkaline forming?

A food's acid or alkaline forming tendency in the body has nothing to do with the actual pH of the food itself. For example, lemons are very acidic (due to citric acid), however the end-products they produce after digestion and assimilation are very alkaline – so lemons are alkaline-forming in the body. Likewise, meat will test alkaline before digestion, but it leaves a very acidic residue in the body, so like all animal products, meat is very acid-forming.

There are several versions of the Acid/Alkali food chart to be found in different publications as well as on the Internet.

There is agreement on most foods. However, there is some unsurety as to the acid-forming or alkaline-forming characteristics of some foods.

The following is the result of an overview of the available information.

To repeat the generalisation: All animal products are acid-forming. Most fruit and vegetables are alkaline-forming. Processing increases acid-forming potential.

### High Alkaline-forming Foods

<b>FRUIT</b>	Cantaloupe Grapes (sweet) Grapefruit Kiwifruit Lemons Limes	Mango Passionfruit Pawpaw (papaya) Raisins Watermelon
<b>VEGETABLES</b>	Asparagus Barley grass Broccoli	Parsley Spinach (raw) Wheatgrass
<b>JUICES</b>	Fruit juices (fresh)	Vegetable juices (fresh)
<b>BEVERAGES</b>	Herbal Teas	Lemon water

## Moderate Alkaline-forming Foods

<b>FRUIT</b>	Applies Apricots Bananas (ripe) Currants Dates Figs Grapes Melons	Nectarines Oranges Peaches Pears Persimmon Pineapple Raspberry Strawberry
<b>VEGETABLES</b>	Beetroot Cabbage Carrots Cauliflower Capsicum (Bell pepper) Celery Ginger Green beans	Lettuce Onions Parsnip Potatoes (with skin) Pumpkin Squash Sweet Corn Turnip
<b>LEGUMES</b>	Peas	
<b>NUTS</b>	Almonds	
<b>BEVERAGES</b>	Carob	Green Tea
<b>SWEETENERS</b>	Brown rice syrup	
<b>CONDIMENTS</b>	Apple cider vinegar	

## Low Alkaline-forming Foods

<b>FRUIT</b>	Avocado Cherries	Chestnuts Coconut
<b>VEGETABLES</b>	Artichokes Brussels Sprouts Cucumber Eggplant Herbs Horseradish Leeks Mushrooms Olives	Pickles Radish Rhubarb Spices Taro Tomatoes Tofu
<b>LEGUMES</b>	Lentils	Soy Beans
<b>SEEDS</b>	Sesame	
<b>DAIRY</b>	Goats milk and whey Soy cheese	Soy milk
<b>GRAINS</b>	Millet	
<b>SWEETENERS</b>	Honey (raw)	Maple syrup
<b>OILS</b>	Olive	

## Low Acid-forming Foods

<b>FRUIT</b>	Cranberries Nutmeg	Plums
<b>VEGETABLES</b>	Mustard	Spinach (cooked)
<b>LEGUMES</b>	Chick Peas	Kidney Beans
<b>NUTS/SEEDS</b>	Brazil Cashews Macadamia	Sunflower Pistachios Pumpkin
<b>DAIRY</b>	Butter (fresh) Cottage cheese Cream (fresh and raw)	Milk (cows – raw) Yoghurt (plain)
<b>GRAINS/CEREALS</b>	Barley Cereals (unrefined)	Rye
<b>SWEETENERS</b>	Honey (processed)	Raw sugar

## Moderate Acid-forming Foods

<b>FRUIT</b>	Bananas (green) Blueberries	Prunes
<b>VEGETABLES</b>	Potatoes (without skins)	
<b>LEGUMES</b>	Lima beans Navy beans	Pinto beans
<b>NUTS</b>	Pecans	Walnuts
<b>DAIRY/EGGS</b>	Milk (homogenised and pasteurised) Most processed dairy (cow's milk) products	Eggs
<b>GRAINS/CEREALS</b>	Breads of rye, rice, oats, corn Cereals (refined) e.g. wheatbix, cornflakes Buckwheat Oats	Pasta (wholemeal) Rice (brown)  Tapioca Wheat (wholemeal)
<b>MEATS</b>	Chicken Deer Fish	Lamb Shellfish Turkey
<b>JUICES</b>	Fruit juices processed	Fruit juices – with sugar
<b>SWEETENERS</b>	Maple syrup (processed) Molasses	Sugar (brown)
<b>CONDIMENTS</b>	Vinegar (white)	
<b>BEVERAGES</b>	Tea (black)	Wine (red and white)

## High Acid-forming Foods

<b>VEGETABLES</b>	Semolina	
<b>LEGUMES</b>	Peanuts	Peanut butter
<b>DAIRY</b>	Cheese (hard, parmesan) Custard	Ice Cream
<b>GRAINS/CEREALS</b>	Pasta (white flour) Rice (white)	Wheat – all white flour products
<b>MEATS</b>	Beef Goat	Pork Rabbit
<b>SWEETENERS</b>	Chocolate / Cocoa Sugar (white)	Sweeteners - artificial
<b>BEVERAGES</b>	Beer Carbonated and fizzy soft drinks	Coffee Spirits
<b>DRUGS</b>	All Pharmaceuticals Coffee	Tobacco

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