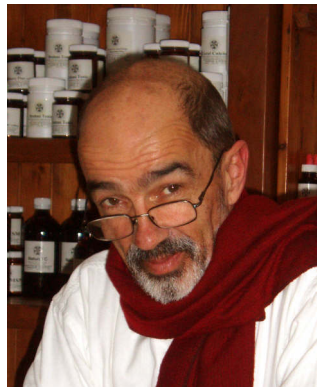


**THE ACID ALKALINE STORY**  
**A Practical Ayurvedic Perspective**

**Acidify and Live!**

**‘Finding a balance,  
With the acid alkaline debate’**



**Jay D. Mulder ©**

# THE ACID ALKALINE STORY

## A Practical Ayurvedic Perspective

### **98% of Biological substances are acidic!**

In elementary chemistry there are fluids, powders, gases or liquids which are either acid, alkaline or neutrals. Of all living biological systems 98% are acidic, 2% are either neutral or alkaline. A grape, or grape leaf, lettuce, pineapple all fruits basically contain a total acid content. Grains are generally slightly acidic and flesh is on the acidic side. In good health saliva and urine are slightly acidic. Urine has a daily shift between alkaline in the afternoon acidic in the morning. This simply shows the ability of the bodies metabolic systems to clear acids which are a natural result of living processes.

The blood is slightly alkaline. Digestive juices like pancreatic and bile are alkaline. In conclusion the body and foods are basically acidic with blood, plasma, bile and pancreatic juice giving the alkaline balance.

Many drugs derived from natural substances are extracted alkaloids (generally alkaline organic chemicals containing nitrogen) like opium derivatives and quinine. Even though they are produced of acid plants they are poisonous because of being extracted concentrates.

According to Ayurvedic philosophy the universe functions on the principle of the sun (pitta or acid) giving heat or metabolic force while the moon (kapha or alkaline) maintains the juice of life. Acid or pitta is the metabolic principle that powers every cell of the body while alkaline or kapha is the principle that protects, stabilises and nurtures every cell. A crude example could be your body compared to a car, with pitta as petrol and kapha as oil. Both are essential, the oil compensates for the friction of the combustion, while petrol fuels combustion.

*Life is a balance of opposites; health is never a one-sided affair!*

## **Balanced Action is the key**

It appears that acids are the life sustaining chemicals of human life and that alkaline is the balancing agent. Accepting alkaline as the balancing agent means just that, in other words too much or too little alkaline substances will cause health problems. An Ayurveda verse states, 'too much of nectar, turns to poison'! So even though alkaline substances are the balancing agent of acidic substances, over indulgence in alkaline is as detrimental as under indulgence! This is the Ayurvedic message of mithya yoga, or 'faulty action' such as over-action, under-action or improper action. Ayurveda encourages yoga in action or balanced action. Over-action, under-action or improper actions are the major cause of roga or disease.

## **Vinegar, Ayurveda and Folk Medicine**

Dr Jarvis has compiled his book Folk Medicine in 1960 which is primarily the application of acetic acid or apple cider vinegar for balance and health. Vaidyaratnam (jewel of a doctor) P. S. Varier in his book of Ayurvedic treatments Chikitsa Samgraham has described a process for producing a medicine known as dhanyamla (wealth of sour). A fermented vinegar of a special rice, horsegram, lime juice, ginger and ajwan seeds. This was prepared in large quantities while burning incense and ghee lamp with the chanting of mantras. This acidic substance enkindles digestive fire, invigorates, awakens the mind, is strengthening, aids moistening and swallowing of food.

In Science, acid is considered as important as alkaline! Both interact, interexchange and are interdependent in biological processes. The acid alkaline harmony of various liquids in the body is paramount for balance and health. 'Acid is not the big bad boggy-monster!' The so-called health book 'Alkaline or Die' has no science, logic nor intellect. The fault with the Western brain, it rarely wants to look at both sides of the story. The Western idea of sensationalism requires one side of the story to be over emphasized and thereby distorted.

*Becoming excessively alkaline or acidic are toxic conditions!*

An article entitled ‘The Miracle of Yoghurt’ or ‘Yoghurt, The Deadly Poison’, will catch the attention of the population. Whereas an article entitled, ‘Yoghurt, Terribly Bad but Wonderfully Good’ (see ‘The Complete Ayurvedic Cookbook’) will puzzle the Western boxed in thought which is on a mono rail. This balanced approach looking at both sides is not desirable by the bland Western intellect.

### **Ayurvedic Philosophy**

The truth of the matter is incredibly simple, yet quite complex. An aphorism which paints this Vedic philosophy runs as follows;

***“Nothing is good, Nothing is bad,  
But it is Individual, Quality, Time, Place and Circumstances that  
determine so!”***

The art of knowing Individual, Quality, Time, Place & Circumstances for a desired outcome is AYURVEDA!

### **The Science of Tridosha-Balance**

Ayurveda teaches the science of tridosha, how to balance the elements of nature, whether they are acid or alkaline, pitta or kapha, heat or cold, water or fire, the result of balance is life or vata. Water is essential to life; we have heard that we are more water than any other element. Water is therefore nectar. Cold water gulped in cold season by an elderly person is poison. Warm or hot water sipped in cold season is nectar.

### **Where to measure Ph?**

What is acidic or alkaline when it comes to the human body?

This is a difficult calculation. Saliva is slightly acidic at 6.8, while stomach acid is very acidic at 1.6, as the food progresses along the GIT at the small intestines and the pancreatic channel the Ph is 8.00 while more alkaline at the bile duct 8.2. And if measured the skin of your big toe it would be slightly acidic!

*Alkaline is not bad in itself but when acid items are deficient in the diet and the body, alkaline disease manifest*

## **Alkalinity is the most favourable situation for Bacterial growth!**

Dr Jarvis explains in his book Folk Medicine, the following table of bacteria and favourable reactions for growth are slightly alkaline.

### **MOST FAVORABLE REACTION OF MEDIA FOR GROWING PATHOGENIC BACTERIA**

<i>Microorganism</i>	<i>Reaction</i>
Staphylococcus	7.4 alkaline
Streptococcus	7.4 to 7.6 "
Pneumococcus	7.6 to 7.8 "
H. Influenza	7.8 "
Meningococcus	7.4 to 7.6 "
Gonococcus	7.0 to 7.4 "
Corymbacterium diptheriae	7.2 "
B. abortus	7.2 to 7.4 "
B. tularemae	6.8 to 7.3 "
Clostridium tetani	7.0 to 7.6 "

It becomes apparent, as one studies this list, that microorganisms harmful to the human body grow on an alkaline soil. This is particularly interesting in the light of the evidence that in dairy cows and human beings alike, an instinct exists which leads them to seek an acid intake.

We can understand that a salad requires dressing with vinegar for digestion, flavour and bacterial protection! From the energetic understanding salad is cold, dry and light which are the qualities to disturb Vata. However when a salad is properly presented with oil, vinegar, lime juice, Ayurvedic salt and pippali, the opposite energies like wet, heavy and hot are enhanced thus balancing any faults or constitution that a salad may naturally have due to its inherent qualities (gunas) as mentioned. Salad in cold weather, not properly dressed or in excess will retard the digestive fire causing secondary acidity. This secondary acidity will be explained in this article.

*Both acid and alkaline have favourable and unfavourable aspects!*

## **When Acid is Alkaline (Buffers)!**

In biological reactions an acid is a proton donor, when a weak acid like apple cider vinegar or citric acid dissociates in water it becomes ready to act as a base because it has lost its protons and is therefore ready to accept protons which make an alkaline substance.

Congenitally some substances are called acids and others base or alkaline. This is measured from the pure substance not in association with water. In other words citric acid and acetic acid dissociate in water to become alkaline or base substances. Warm or hot water chemically speeds up the reaction of acetic or citric acid having an alkaline reaction.

## **Alkalosis causes the acidity?**

The majority of clinical presentations are of an alkaline nature, low stomach fire, damp spleen, dullness, constipation or diarrhoea, reflux, stomach ulcers or irritable bowel syndrome. The tongue can be thick and swollen, pale, thickly coated or peeling with crinkled indents at the side. This indicates erratic or slow stomach fire (agni) in Ayurveda. Any acidity of the system is caused by a primary alkalosis. The saliva is alkaline not slightly acidic. To say, this person is acidic is true but the cause must be identified for proper treatment. So it might sound mind boggling but the acidity is treated with light cooked spicy food while sipping warm apple cider vinegar. The acidity is treated with easy to digest foods and mild acids to improve digestion and cure the underlying problem of alkalosis which is actually blocking the system, causing secondary acidity.

In Ayurveda there are four measurements of the all important digestive fire known as jathara agni, namely;

**Fast fire, slow fire, erratic fire and balanced fire.**

Fast fire may cause ulcers if excessive acids erode the tissue.

*Ayurveda gives the concept of equilibrium of acid and alkaline for good health*

Slow and erratic fires may cause ulcers because the digestive bolus sits in the stomach too long and collects improper acids from fermentation. It is these collected acids, which over time erode the stomach lining thus precipitating the possibility of ulcers.

**So we have two types of acidity;**

1. From high acid or over production.
2. Low acid or erratic acid production. Slow digestion.

In fourteen years of clinic only one high acid individual with several thousand low or erratic acid conditions tell the story.

This clinical experience gives way to the conclusion that most modern acidic conditions are due to a low acid stomach brought about by punishing the digestive fire with processed foods!

Saliva is said by Titora to be slightly acidic, yet it is difficult to find a person who has not alkaline saliva. Make a test, purchase test stripes from your pharmacy test your saliva and morning urine, both are meant to be acidic. Constant alkaline urine precipitates UTI, urinary tract infection. Alkaline saliva effects absorption and energy, showing an alkalosis.

Consider the condition of reflux, after one eats, the food sits in the stomach too long, (because of erratic and slow digestive fire) fermented acidic substances bubble back into the throat and erode the valves and tissue. Overtime this erosion gives rise to Barrett's Oesophagus and eventually cancer of the throat.

**One may ask how to treat reflux?**

1. Change the diet; enjoy fruits, vegetables and whole grains. Avoid processed foods which cause indigestion. Eat for digestion not to fill the hole. Avoid faulty combinations!

*Judge a meal by how you digested it, and evacuated nicely, taste is important but secondary to the above!*

2. Improve digestive capacity with the appropriate digestive aid like apple cider vinegar, astha churna, trikatu, triphala. And the joyful use of spices.
3. Incorporate appropriate habits at meal times, no cold or ice drinks, no snacking on nuts between meals. Snack on light fruits, eat when digestion is available. Eat to digest!

The modern system of indulging fanatically in alkaline items while demonizing acidic items can only be described by the unkind words as the system of the square Western mono-thought; it holds no resemblance to how nature actually works!

### **Antacids equal Anti-Life?**

The idea of antacids is the modern system of magical health by cheap trick. The PBS system subsidises antacids to the tune of billions of dollars per year for a refluxed population. Antacids simply block acidity also blocking digestion in the process. A good example is, ‘You are driving your car when the red oil light flashes, you pull over and find an expert mechanic who simply cuts the wire, he tells you the light is off, the problem is therefore solved’.

### **The Side Effects of Antacids**

Pasty unpleasant taste in the mouth, diarrhoea or constipation, fatigue, dull brain, depression and lack of motivation, increased bacterial infections, increased food allergies and bone weakness, fractures and indigestion. But the good news from doctors is, ‘We have Prosac’!

Antacid drugs cause the diseases of alkalosis variety, as much as excess acidic items cause acidosis type diseases. Researchers believe the side-effects of proton pump inhibitors PPI’s (antacids) are worse than the so called disease. After all the disease that PPI’s are used for is simply indigestion yet the side-effects create much greater diseases.

*‘Acidify and Live’, is an Ayurvedic tatva (truth)!*



## Acidic is a very general term indeed!

To gain an understanding of the acid conditions of the body we need to distinguish between *favourable* and *unfavourable* acidic conditions and also *primary* and *secondary* acidic conditions. If we simply use the word acid without differentiation of *favourable* and *unfavourable* and *primary* and *secondary* our understanding will be of little value to our health.

**Favourable acid** is when digestion is in prime condition, when food is fully digested in the correct time and before taking more food! At this time some acidic substance like spices, salt, pepper, chilli or vinegar can be used to assist favourable acidity. These acidic substances are taken relative to the individual, time of year, time of day, time of life and the digestive capacity. If these acidic digestive substances are under-used, over-used or miss-used the result will be imbalance or **unfavourable** acidic conditions.

If one extinguishes the digestive fire at meal times with icy cold liquids this will cause indigestion overtime and an alkaline condition. Food will sit longer and develop an unfavourable acidic nature, from stagnation and fermentation processes. Thus acidic conditions of the body are generally **secondary acidity** caused by impaired digestion. **Secondary** acidity is naturally an **unfavourable** acidic condition.

Thus most acidic conditions are directly the result of damage to the digestive power, and are thus connected to chronic indigestion. Thus this condition is called **secondary acidity** which is best treated by improving the digestion which is generally achieved through prudent use of acidic substances. These acids give an alkaline reaction.

**The acidic digestive fire is known in the traditional ancient Ayurvedic literature as Bhagavan Isvarah or almighty God!**

*The sun has favourable and unfavourable aspects, however one cannot exist without the sunshine! Similarly it is not possible to live without acid which also has favourable and unfavourable aspects!*

## Acid and the Body!

Alkalinity or acidity is not synonymous with health. Acid is like sunshine or daytime, alkaline is like moonshine and night. Acid is working at your passion in life, alkaline is sleeping and gaining energy. Together they embrace, becoming holistic and sustainable.



**Three Alkaline tongues with poor digestion and secondary acidity**

### Pitta and Acidity

In Ayurvedic medicine pitta is considered the functional acidic element of the body responsible for conversion of nutrients, eyesight, digestion, maintaining body temperature, body radiance and cheerfulness. Iron, magnesium, calcium and many more nutrients require an acid environment to be metabolized (acidified and dissolved into the body's channels systems for further conversion). Clinical presentations of anaemia, bloating and indigestion, fatigued, halitosis, diarrhoea or constipation and dull brain are conditions caused by over alkalizing or neutralizing the natural stomach acids at meal time. Modern antacid medications do just that, they over alkalise the stomach, blocking the absorption of vital minerals which require acid to be digested. If the sun were not to rise again, how would the

*A sour pineapple is acidic and heating and the same fruit, ripe and sweet is cooling and more alkaline!*

world cope? Similarly with deficient acidity and over alkalinity the energy of metabolism is covered by cold, wet and darkness.

The body will never be so simple, that by filling the stomach with alkaline water, health problems will disappear. Possibly we should wonder why nature organised Hcl acid in the stomach?

### **Automatic Acid Buffering Systems**

Nature has organised the body with three acid buffering systems. **The first one** is as simple as breathing; The exchange of air and waste from the lungs is a chief alkalizing agent imperceptively employed.

**Secondly**, the blood liberates bi-carbonate which keeps a narrow balanced Ph. **Thirdly**, the kidneys, with a hormone triggers a ph adjustment. **The bodies intuition is equilibrium between acid and alkaline.** Instead of becoming a control freak by drinking alkaline water or glasses of bi-carbonate to snuff out any acidity in the stomach, ***one could work with the digestive force of the body*** by the use of mild digestives according to time, place, individual & circumstances.

### **Six Tastes every Day for Health**

The Ayurvedic way of balance is to take the six tastes every day. Namely sweet, salty, bitter, pungent, sour and astringent food requires to be consumed with each meal. Bitter taste we know as cooling, cleansing, alkaline, lowering of blood sugars. Good for weight loss and balancing the over indulgent in sour, salty and sweet taste. Modern society has lost the connection with nature's alkaline herbs and instead eats meals of predominately sweet, sour, salty, pungent tastes with little astringent and no bitter. Eat a bitter leaf with as many meals as possible, the ancients would chew a neem leaf. Also avoid excess fried food, sticky sweet and cold foods, commercial cheese and processed foods!

*Indigestion and constipation will cause many unfriendly acids to form even if the diet is alkaline.*

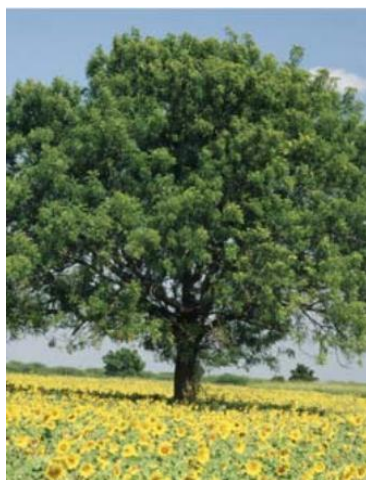
Vaidya V. M. Gogte explains why bitters substances are paramount in Ayurveda. “Over indulgence in sweet-sour diets and lesser consumption of bitter food leads to a particular group of diseases which can be controlled only by restricting sweet-sour diets and judicious use of bitter diets.” Sweet and sour foods are predominant with taste; bitter diet is predominant in potency. Bitter taste gives strength to the stomach, clears the G.I.Tract known as mahasrota, are easily digested, increase strength and is the medicine for plasma and blood. Bitter herbs are excellent for clearing toxins from the body, excess heat and are included in any fever remedy. Finally one incredible aspect of bitter taste is that it enhances other tastes even though it is not tasty itself.

### **Post Digestive Effect Vipak**

Ayurveda has a concept known as vipak, which means ‘after digestion’. Nothing we eat or drink remains the same in the body. This may explain how a radical alkaline diet will acidify the body over time due to food stagnation thus causing the channels to be blocked and acid build up. Also this explains again how acidic substances have an alkaline response.

**“The world is dynamic, and the one constant thing is change.”**

### **Grow a Neem Tree-Nature’s Antacid**



Neem tree and leaf

*Bitter herbs and foods are nature’s tonic for the stomach and blood.  
They do not taste good but make life tasty!*

## **Incredible Neem!**

The Ayurvedic system encourages balance! To take all six tastes daily in moderation or according to need and the season. An easy way to take a bitter taste is to plant a neem tree, as simple as that and you have a bitter alkaline tonic with the above potent qualities as needed for the rest of your life. The cost is only some little care and water. It is simple, the body is created to simply deal with the perplexities of Ph balance, you, only have to cooperate with nature of your body!

## **Introducing Guduchi – Ayurvedic Acid clearing herb!**

Guduchi is Dr Rajesh's favourite herbal formula which targets the liver, kidney, digestive and immune systems.

## **International Journal of Ayurvedic Research-Guduchi herb**

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2924974/>

The prime actions of this herb is as follows: **Radiation protective!**

The Radiation & Cancer Biology Laboratory, Department of Zoology, University of Rajasthan, Jaipur 302 004, India showed that Guduchi or *Tinospora cordifolia* is **gama radiation protective** in mice. Mice testicles that were irradiated actually continued to grow with prior internal doses of guduchi, not like the mice that had no Guduchi.



*Guduchi is known as Amrta (nectar) in Sanskrit and Tinospora Cordifolia in Latin.*



Villagers go out each day to the vast forests of South India to harvest Guduchi vines (*tinosporia cordifolia*).

The action of the **Glycosides** content of **Guduchi**:

1. It stimulates the function of macrophage and neutrophilla to produce leucocytosis.
2. It inhibits lipid peroxidation and free radical formation.
3. It decreases the capillary permeability and reduces number of disrupted mast cells.
4. It exhibited insulin like action and significantly reduces the blood sugar level.
5. It possesses antineoplastic activity and show cytotoxic effect on tumor cells by reducing GSH (glutathione) concentration.

**The action of the Bitter content of Guduchi:**

1. It reduced oxidative stress and lowers blood sugar level in body.
  2. It enhanced lipid peroxidation in the liver and blood of tumor-bearing models and accompanied by significant decreases in the activities of GSH-dependent antioxidant. It lowers the lipid levels especially cholesterol and LDL-cholesterol in body.
- 

**Actions in Disease:**

1. It is used in burning sensation, hyperdipsia, intermittent and chronic fevers.
2. It is used in inflammations, gout and skin diseases.
3. It is useful in flatulence, dyspepsia, vomiting and stomach problems. Can be very helpful with reactionary headaches.
4. It is used in leprosy, diabetes, cardiac debility, jaundice and general weakness.
5. It is also used in anaemia, uropathy and splenopathy.

Famous in Ayurveda as an anti-dote for poisoning and a substance that clears uric acid from the channels. Guduchi can be safely used in digestive and skin complaints in newborns from eight weeks.

*Alkaline are acid are both nectar but when in excess poison!*

**Research Information :** *Tinospora cordifolia* shows significant bactericidal activities. It improves bacterial clearance as well as improves phagocytic and intracellular bactericidal capacities of neutrophils. It also stimulates macrophage action. As a result of these actions Guduchi stimulates the immune system. (Ref. Thatte UM, Kulkarni MR and Dahanukar SA, Immunotherapeutic modification of *Escherichia coli* peritonitis and bacteremia by *Tinospora cordifolia*, IPGM (1992) 38 (1): 13-15)

**Guduchi has a Cytotoxic effect - Cytotoxic** substances used in the treatment of malignant and other diseases. Modern cytotoxic substances are designed to destroy rapidly growing mutating cells.

*See, Antimutagenic extract from Tinospora cordifolia and its chemical composition.* By Natural Plant Products Division, Institute of Himalayan Bioresource Technology (Council of Scientific and Industrial Research), Palampur, Himachal Pradesh 176 061, India. 23 July, 2010

**Guduchi is a ‘Rasayana’** (Western idea of an adaptogen)

- ▣ Rasayana = “an elixir”, alchemist, fluid channel, first rain, butter milk, mercury, pippali, a vermifuge (literally translations)
- ▣ "One obtains longevity, regains youth, gets a sharp memory and intellect and freedom from diseases, obtains a lustrous complexion and strength of a horse." (Caraka Samhita 600B.C.)

For a complete research document on Guduchi go to:

**International Journal of Ayurvedic Research-Guduchi herb**

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2924974/>

In summary;

*Nothing is GOOD. Nothing is BAD! However it is Time, Place, Individual, Variables and Qualities which determine so!*

## **In Conclusion**

The huge fault with over alkalizing the body through diet, artificial alkaline water or medication is poor digestion which naturally develops over time. In Ayurveda poor digestion is to be totally avoided because it is the root of all disease, fatigue and depression. The fire in the belly gives nutrients to all cells as well as the mind indirectly. When the digestion is covered by a wet blanket, so is the mind, thus enthusiasm, vitality and brightness suffer greatly. Also the bazaar result of severe alkalizing the body and retarding digestion is secondary acidity due to slow stagnant metabolism.

The body has been crafted by nature with a keen eye and a sound intellect thus awarding acid buffering systems which naturally deal with this fault of metabolism namely a buildup of acidic substances. The body simply requires a little co-operation from the knower of the body to make wholesome and balanced dietary choices. It is noted in *Safe and Unsafe Carbohydrates* that modern processed foods have an increased acid reaction therefore whole grains, fruits and vegetables require to be the wise choice for acid alkaline balance.

Favourable acidity is when digestion is in prime condition, when food is fully digested in the correct time and before taking more food. Primary acidity is the acidity of digestion which supplies four billion cells with nutrients and thus vibrate life. For the purpose of knowledge, favourable and primary acidity require to be differentiated from unfavourable and secondary acidity.

Herbs such as Neem and Guduchi are nature's dedicated servants which not only reduce acidic conditions in the body but also improve digestion. Guduchi is also translated as the 'Protector of the body'.

*Nature is not controlled nor manipulated, but adored, sublimely!*





***“The truth is inconceivably the same yet different!”***