



Life began in the sea, and as such, all living things contain water and function in an aqueous space. It is possible to observe an internal ocean within the cell and an external ocean encompassing the cell. Water's simple molecule - two hydrogens bonded to an oxygen - provides the space and plane for the molecular and biological world to move around and to carry out its life functions. Digestive enzymes cannot reach and carry out the mining of the raw materials without an aqueous space, which provides them the room to maneuver in order to transport nutrients to the absorption cells. Furthermore, the bloodstream is 90% water, because water makes it possible for nutrients to drift on the River of Life and to hydrate any dehydrated cells, while stripping the waste and transport it to the liver.

Why is it important to develop appreciation to water? We'll explore water's importance and the influence of substances on its pH. We'll examine the reason for the development of tissue calcification and the phenomenon of Osteoporosis, as well as, which foods can return the body to its original and healthy pattern.

---

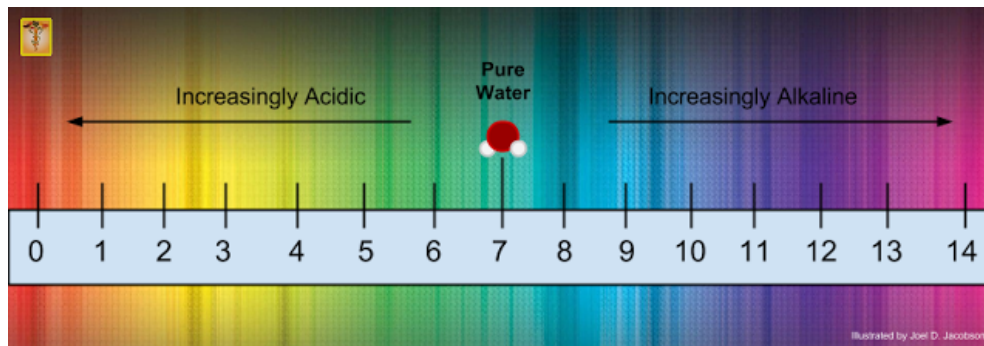
## What is pH?

**pH** or Potential Hydrogen, is a measurement of the nature of substances within an aqueous environment.

On this scale, one is able to observe 3 different states:

1. An Acid value, which is every value under the number 7;
2. A Basic or Alkaline value, which is every value above the number 7;
3. and a neutral value, which is a solution that falls directly on the number 7.

In chemistry, pure water is neutral. It is the primary substance of every liquid solution, and due to that it is found on the pH scale at number 7. Therefore, if you would measure the pH of pure water inside a glass, the measurement will indicate to you the level of purity. If the measurement returns with a either an acid or alkaline value, it is probable that within the volume of water



exists molecular substances in a concentration sufficient to move the pH value to the acid or alkaline direction.

One can also play with the solution and add an acid or alkaline substance. If you would add an acidic substance to pure water, such as tea, coffee, beer, vinegar or gastric juices, the pH measurement will display an acidic value in different levels. It is possible if you would only add caffeine, the acidic substance in coffee, into pure water, the solution will receive a level of acidity dependent on the concentration of caffeine. It would be a big difference whether you added a teaspoon of coffee or 3 teaspoons into an identical volume of water. In the case of 3 teaspoons of coffee, the concentration of caffeine is high, and it is what would affect the pH value within the solution. Perhaps the value would be 3 times more acidic than the acidity you'd get from a single teaspoon.

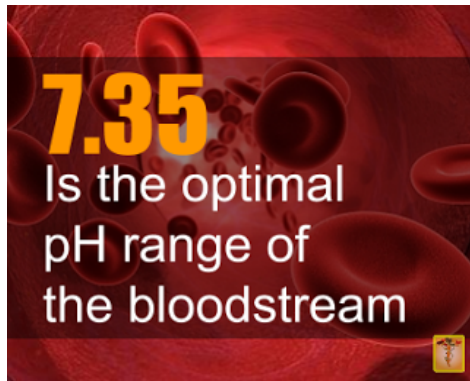
If you would like to reverse the acidity and bring it up to a basic and alkaline level, you could add pure water in order to dilute the concentration of the acidic substance, or you could add an alkalizing substance, in order to affect the pH in a solution without the addition of water. Substances, that naturally exhibit alkaline properties, are: Sea water, fertilizer, bleach, but also alkaline elements such as Calcium, Magnesium, Sodium and Potassium.

## **The Biological Environment**

In the biological body, at least the human body, one is able to locate different values in different areas. The skin has a specific pH, and so does the hair, the mouth and the bloodstream. Even the cells have a preference, and when the environment becomes too acidic or too basic, our cells suffer and their function slow down, because it isn't comfortable for them to exist in an inhospitable environment, in a chemical sense.

## **The Bloodstream**

The pH of the bloodstream has been measured and it has been found that the body enjoys a specific value of 7.35 - slightly alkaline. The bloodstream is must important, because it is the River of Life that allows the transportation of nourishing substances, i.e. nutrients, to all the cells in the body. At the same time, the river picks up wastes from the cells on its way and carries the waste to the liver in order to discard it or recycle it.



The pH of the River of Life is affected by every meal we have, from every juice we drink, from the concentration of substances in the air with breath, and from the substances that come in contact with our skin and are absorbed through it into the bloodstream.

Due to the permeability of the bloodstream and the capacity of the aqueous solution to be affected by the dispersion of concentrated substances within its volume, all substance that enters the mouth and reaches the intestines eventually is digested into its absorbable form

for it to cross the gut-blood barrier. If, for instance, you drank a can of Cola, a situation will arise where the digestive enzymes will transport the substances inside the liquid solution to the absorption cells, and in turn, the substances will enter the bloodstream and will have an affect on the balance of concentrations already existing in the River of Life.

The body will want to return the pH of the bloodstream to its safe and comfortable range. In order to accomplish that, the body will utilize substances already in its possession, substances with an alkalizing effect, and in that way to prevent pressure and internal injury of blood vessels and organs.

### **The body's ability to adapt itself to the nature of the substance**

The body's passion to preserve the balance of its internal and external environment will cause it to respond to the entry of all substances. The tongue's ability to receive and quantify the nature of the substance provides the brain precise information in regards to its nature, and in turn, the brain sends messages to the stomach and the rest of the digestive system. The stomach will match itself to the nature of the substance and produce its gastric juices accordingly, such that the stomach will be able to digest the substance and avoid wasting resources. The same thing can be observed in the passage of the contents of the stomach into the small intestines; the contents of the stomach are too acidic for the small intestines, so the small intestines creates and secretes alkalizing substances (Bicarbonates) in order to neutralize the acidity of the digested food ([chyme](#)).

The body had been observed capable of regulating the pH in every corner it is able to reach. There are areas in the body that have drastically been dehydrated, such that the capillaries are closed and cells are atrophying. Water must reach those corners in order to restore the liquid composition and dilute the acidity. In the case of cancerous cells, which enjoy an acidic environment (low in oxygen), when water enters the area, it can return the cellular environment to a healthy level, and in that way the cells become healthy. That said, one can infer that a clean environment causes the cells to be clean, and moreover, a clean cells is a healthy cell, right?

## The body's reaction to a highly acidic dosage (Acidosis)

Let's say you ate a slice of bread and on it chocolate spread. From the perspective of the composition of macro-nutrients in this simple meal, the level of carbohydrates is very high. If you knew that all carbs are digested into their basic form - simple sugar (such as glucose) - you will be able to deduce from the composition of the meal, that the raw materials, which will soon reach the small intestines to be absorbed into the bloodstream, exhibit acidic properties, and as such, an acidic influence on the pH of the bloodstream.



A meal high in empty carbs equates to an acidic meal.

Since Man isn't a master at reading symptoms and understanding them as signals of imbalance in bodily systems, Man won't leap quickly and directly to the substance which could balance the pH. Instead, the body will have to utilize local substances in its surroundings, because the substance isn't about to appear from the outside. In the case of a high concentration of acidity inside the bloodstream, the body will draw alkalizing substance from its tissues and bones, such as: Calcium, Magnesium, Sodium and Potassium.

Insulin is released in high amounts in order to open the cells for sugar to enter, but calcium is drawn out from the bones in order to neutralize the levels of acidity and prevent tissue destruction by the extremely high concentrations. [Acidosis](#) is over acidity of the blood, and it occurs when the pH of the blood drops below 7.35. If the body isn't capable of regulating the blood's pH, tissue damage and the weakening of the Molecular Defense System of the cells occurs.

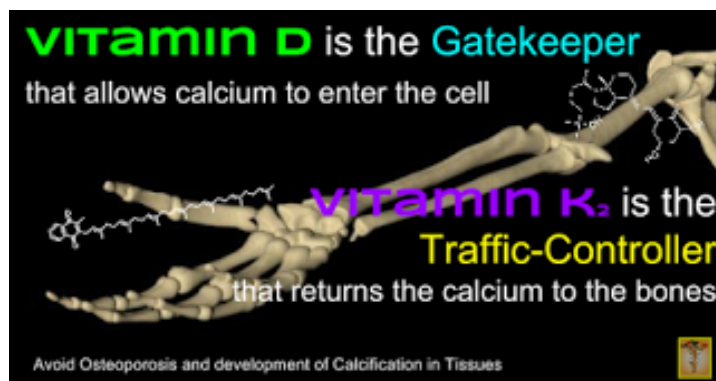
On the other hand of the pH scale, exists a situation of a too-high alkaline concentration. [Alkalosis](#) is over alkalinity of the blood and bodily fluids. It occurs when the pH increases above 7.35, and as such, yet again the body will activate mechanisms to regulate the pH in the bloodstream to return it to the safe zone. In each case of Acidosis or Alkalosis, to the body alkalizing or acidifying substances, which with them it can brake the drastic shift and return the pH to its safe zone.

## The problem with Empty Carbs and the formation of Calcification

An empty carb is like a slice of bread or a crystalline and refined sugar - there isn't even a handful of enzymes or nourishing substance, that are suppose to assist in digesting the sugar. Therefore, the body finds itself having to draw minerals and vitamins from its tissues, in order for it to be able to utilize the sugar. Perhaps water is the space sugar can float within, however, it is

the minerals and vitamins that act as keys that fit precisely in specific areas on the cell membrane, and allow the opening of the gates for the influx of nourishing substances.

Calcium is one of the substances that the body stores inside the bones. Actually, 99% of the calcium in the body is located in the bones, which leaves a mere 1% to be found in tissues. Calcium has different roles, such as the release of neurotransmitters and contraction of muscles. Calcium is a soft gray alkaline earth metal, and it is capable of slowing down the activity of the cell, when the cell is too acidic. You can think of an acidic environment as a fast environment, and an alkaline environment as a slow one. Calcium will be released to the bloodstream in order to neutralize the effect of the acid, and to slow down the fast activities of the cells under the influence of the acids.



### Vitamin D's role

In order to enter the cell, calcium needs the vitamin responsible for opening the cell's gates - Vitamin D, and in particular [Calcitriol](#). This vitamin is fat-soluble, and therefore it requires its production on the skin from sunlight or to acquire it from products high in fat. Low-fat products would not provide adequate amounts of biologically activated vitamin D, and

every other product that is "fortified" with vitamin D (such as breakfast cereals) also will not be absorbed into the bloodstream, just because there isn't any fat in cereals. A fat-soluble vitamin means, that the vitamin is composed with fat in its molecular structure. Anyway, the vitamin is necessary in order to allow calcium to be available for the cell.

However, occurs a situation where calcium does not return to the bones, and instead, it accumulates in the tissues and forms a sediment. [Calcification](#) happens because of Vitamin K2 deficiency. You may indeed be able to call vitamin D as the gate-keeper, but vitamin K2 is the traffic-controller, because it is responsible to ship the calcium back to the bones.

The formation of calcification in blood vessels and various organs in the body, like the heart muscle, at some point is called [Osteoporosis](#), or leaching of calcium. Such a health condition is determined when calcium plaques form extensively in the body - when calcium is found more in the tissues and less in the bones. There is a reason for the appearance of calcium in places it isn't suppose to be, and it is very much connected to nutrition and choices of food.

Due to the high and ongoing acidity of the human body living on an acidic diet (industrial diet), it happens that the incidence of tooth decay and broken bones rises. That is because the density of the calcium in the bones, including the teeth, declines and weakens, to the level by which the bone can break. It is possible to find extensive information from the effects of modern foods on



primitive populations from the book of a famous dentist named [Dr. Weston A. Price](#) called "[Nutrition and Physical Degeneration](#)". Each time a person thriving on his primitive nutrition is exposed to modernized and industrial food, the incidence of tooth decay rises and his immunity is disease is weakened.

### Sources for Vitamin K2

Vitamin K2 is produced by probiotic bacteria inside the gut. These microbes live alongside our digestive and absorption cells of the digestive tract, and therefore it is possible to receive from them a tiny dosage of the vitamin. In the case of extensive calcifications in the body, you may want to reach for a richer source of the vitamin, like all the fermented foods - such as Sauerkraut.



Another option is to buy a supplement.

Though, you better know that the source of the vitamin in the supplement is most likely coming from the fermented food with the highest quantity of vitamin K2 that can be found today, and that is [Nattō](#) - fermented soybean, a traditional and popular Japanese food. Aside from that, you can find the vitamin in [Wheatgrass](#), but Nattō is considered a source 20 times richer than any other source.

### Organs that support the dilution of acids or alkalines

To the body a number of organs that support the health of the bloodstream. Two of these organs, which are important for our discussion, are the lungs and kidneys.



When the bloodstream passes through the lungs, they can draw oxygen and hydrogens (moisture from the air) and expel Carbon dioxide. Actually, high levels of carbon dioxide in the blood can raise the acidity level. Remember, carbon dioxide is the by-product of sugar fermentation by the cells. A man eating carbs must also get rid of the carbon, and the lungs is one of the ways of releasing the pressure in the bloodstream.



The second organ, the kidneys, are an organ that cleans the bloodstream by filtering substances. High concentrations of substances are taken actively by molecular machines in the kidneys and are sent to the bladder. That way, if the concentration in the bloodstream is too acidic, the kidneys will work to receive the acidic substance, and to dilute its concentration from the blood, in a pace that doesn't injure its health.

Either way, the body employs different strategies in order to regulate the pH of the bloodstream.

## Conclusion

The body regulates the concentration of the substances in the bloodstream - the River of Life - in each time that the human intelligence exposes its biological intelligence to substances with a specific property. Man, like all animals of the land and the sky, is composed of an aqueous ocean. Each biological entity responds to a changing environment, and it has a preference for an environment in a specific pH range.

We live in a world where a specific stimuli can lead to a specific response, in order to balance the environment. Sounds like the law of Karma. Anyway, *the nature* of the composition of the macro-nutrients, as well as the composition of salts and vitamins, are received by the nervous system and brain. They, in turn, ensure that the organs of the digestive system are preparing themselves to receive the nature of the substance, in order to produce the most out of it.

Apparently empty carbs, that arrive without supportive substances, elevate the level of acidity in the bloodstream, and as a result, the body, in its desire to survive, will hasten the burning of the sugars and at the same time it will flood the body with alkalizing substances. Perhaps such a protection mechanisms, under the industrial diet, leads to formation of calcification of blood vessels and organs, a thing that impairs their function.

Author of the Article,  
Joel D. Jacobson