

Science Park



THE PH AND HUMAN DIETS



Vrunda Gullapali

ABSTRACT :

H is an abbreviation for potential hydrogen. When we measure pH, we are measuring the concentration of hydrogen ions. A pH reading of 7.0 is neutral. If the pH is above 7.0, it is alkaline; it has a lower concentration of hydrogen ions, and is oxygen rich. If the pH is below 7.0, the fluid is acidic; it has a higher concentration of hydrogen ions, and is deprived of oxygen. The lower the reading, the more oxygen deprived.

KEYWORDS: pH and Human Diets, anaerobic metabolism, extremely frustrating.

INTRODUCTION :

This is why an imbalance in pH leads to disease. For our cells to function correctly, they need adequate oxygen. Human blood has a very small range of pH. If our body cannot maintain blood pH within the appropriate range, we die. The range is between 7.3 and 7.45. In order to keep us alive, our body has buffering systems in place to ensure our blood does not become acidic. Within that range, however, blood that is on the lower end of the spectrum of 7.3 carries around 65% less oxygen than blood operating at a pH of 7.45!

The pH of our extracellular fluid can range much more, and will become extremely acidic on a typical western diet, which lowers our blood pH to the lower end of the spectrum, and severely restricts the amount of oxygen transported to our cells.

PH IMBALANCE—A REAL HEALTH ISSUE :

Why is it important to maintain an acid/alkaline balance? pH imbalance is the precursor for most modern chronic disease. Here are the reasons why. If the body is in an acid state, and unfortunately most people are in an acid state due to our modern diet, then our metabolism changes; from an aerobic metabolism to an anaerobic metabolism. An aerobic metabolism uses fats as its primary energy source. When we become anaerobic, we undergo a major metabolic shift and start burning sugar for energy.

Contrary to popular belief, burning sugar for energy is not our natural state, and we only do it when we have too much of it. It really is our body's emergency response. If we keep eating excess sugar and carbohydrate, we become permanent sugar-burners.

WEIGHT GAIN :

I post weight loss success stories regularly on facebook; amazing results following LCHF. Here are just a few of the most recent examples. Kimberly lost 131 kilos (288 pounds) in 8 months. Chris lost 42 kgs (92 pounds) in 9 months. Ty lost 32.6 kilos (72 pounds) in under 4 months. Rachel lost 45 kilos (100 lbs) in 12 months and said, "Your book changed my life last year." Every time I write about these success stores, there are always a few people

who comment and say, "Why am I not losing weight?" It must be extremely frustrating to see all these weight loss stories and be stuck. I am about to release an ebook to address this problem, but the biggest problem is often acidity.

In addition to changing our metabolism, pH imbalance causes acidic waste to be stored in fat cells, which causes weight gain. Dr Lynda Frassetto, researcher and professor of Medicine and Nephrology at the University of California San Fransisco, found that because of the sheer amount of acid waste our bodies are forced to deal with, they end up stockpiling it in our adipose (fatty) tissue. We do this to protect our vital organs from degradation and failure. Our fat is literally saving our organs. This is why some people have trouble losing weight, even if they are doing everything else "right."

CHRONIC INFECTIONS:

In addition, acid stress also has major health implications. We get less oxygen to our cells, which creates a diseased environment, and an inability to heal effectively. Some people find that they are always sick, or certainly sick more than they should be. This is another symptom. Low oxygen levels lead to chronic infections and poor healing.

CONNECTIVE TISSUE BREAKDOWN :

In addition, we start to literally degenerate. I once heard a great naturopath giving a speech about pH, and he said, "Have you ever felt like you are falling apart?" Of course there was a resounding "yes" in the audience. He said, "Well, you kind of are." We often attribute many of our ailments to ageing, but most are not due to ageing at all.

Being in an acid state leads to connective tissue breakdown, which causes sports injuries, joint issues, prolapses, hernias, gum disease, receding gums, bleeding gums, back pain and injuries to spinal discs (discs are held together by connective tissue), arthritis, immunodeficiency, premature ageing, and more.

CANDIDA AND H PYLORI :

An acid system also becomes a breeding ground for Candida, fungus, and other parasites such as H Pylori. Opportunistic organisms like these thrive in an acidic, low oxygen environment. And because 85% of the immune system is located in the gut wall, it is essential to maintain healthy gut bacteria for good health. Many conditions arise because of imbalanced gut flora, some of which are mentioned below.

FOOD POISONING AND BACTERIAL INFECTIONS :

Why are some people more susceptible to food poisoning? Healthy gut flora protects against invading viruses and other nasties. The friendly bacteria in the gut produce natural antibiotics such as acidophilun, acitolin, lactocitin, bacteriolocin, lactolin, which prevent bacterial growth in the intestine, including e.coli. The friendly bacteria also stimulate production of lymphocytes, which help fight viruses and prevent bacterial infections; they even prevent cancer growth. And, these natural antibiotics also protect us from food poisoning. If salmonella is present in a food we ingest, for example, these natural antibiotics prevent its growth. Like Louis Pasteur himself said, "It is not the germs we need to worry about. It is our inner terrain."

HEARTBURN:

pH imbalance also causes GERD or heart burn. Contrary to popular belief, heartburn is not caused by too much acid in the stomach, and in fact is usually caused by too little acid in the stomach. As we get older, we produce less hydrochloric acid, which is often when heart burn symptoms start occurring. The problem is not too much acid.

The real problem with heart burn comes from dysfunction with the lower esophageal sphincter; the valve that is supposed to prevent stomach acid from rising into the esophagus. Because pH imbalance leads to infestation of Candida, yeasts, and other bacteria such as H pylori, the byproduct of these bacteria is intestinal gas, and the added pressure causes the valve to open when it shouldn't. And, reducing stomach acid increases

the levels of these bad bacteria, which usually makes the problem worse, even though symptoms may controlled. And, reducing stomach acid causes many other health issues, such as digestive issues and difficulty absorbing nutrients.

AUTOIMMUNE DISEASE :

In addition, poor gut health often results in very serious conditions such as autoimmune diseases, including Multiple Sclerosis and other serious forms of autoimmune issues. As Dr McBride, a Russian neurologist and founder of the GAPS (gut and psychology syndrome) protocol, says:

"People with abnormal gut flora do not digest and absorb their food properly, so they develop multiple nutritional deficiencies; their immune system is starving... At the same time, a river of toxicity is flowing from the gut into the bloodstream of these people, because all those pathogenic microbes sitting in their gut flora are converting the food that comes along into hundreds and hundreds of very toxic substances.

The immune system gets quite a lot of this toxicity. We have a poor immune system—it is malnourished; it is intoxicated; it is unbalanced, and, at the same time, it is challenged with a huge amount of work to do. Of course, it cannot function properly. Of course, it cannot react appropriately to various things. Autoimmunity is the result of that."

FATIGUE :

Inadequate oxygen that results from acidity also leads to fatigue. In many cases, this becomes chronic fatigue or fibromyalgia. Cells need good oxygen levels to produce adequate energy.

Most people now have varying degrees of fatigue. Normally, it is attributed to working too much and our modern, busy lifestyle. While it is true that we tend to overwork ourselves, fatigue is not something we should be experiencing. This is why farmers who haven't bought into the low-fat craze often work well into their ninety's and beyond. As they age, their bodies are still functioning well, and go on producing the energy they need. This is in direct contrast to most older people these days, who have severely impaired mobility, very little energy, and often severe osteoporosis and other degenerative conditions.

I have heard many stories, but this one in particular illustrates the point beautifully. One of my readers, Gerry, sent it to me:

OSTEOPOROSIS, TOOTH DECAY, AND GALLSTONES :

And, this is a big one. Our bodies have buffering systems in place to try and keep the body at the correct pH. One of the extreme buffering systems (when our body is continually acid) is to pull phosphate from the bones. Of course, when we do that, calcium comes with it. Not only does this weaken our bones, but when the phosphate is used as a buffer, the calcium is left as free calcium. If calcium is not bound (free calcium), it calcifies things! Why is this a problem? It calcifies arteries, heart valves, and create stones in unwanted places like the gall bladder and kidneys.

This is also why acid stress causes tooth decay. Dentists often say that sugar causes tooth decay, and in a way, they are right, but not in the way they think. Excess sugar consumption creates an acid system, which pulls calcium from the teeth. And, whenever we have tooth decay, it is an indication we are also losing calcium from our bones. And, think about how scary that is. This means our young children are losing calcium from bones from a very early age.

PREMATURE AGEING :

And, being over-acid causes premature ageing. There are many reasons we are ageing faster now than ever before in history, and the biggest is acid stress. One culprit is a lack of fat in the diet (the cell membrane is around 50% saturated fat; if we don't eat enough fats, we can't keep the cell membrane strong, which means we can't keep the cell hydrated). The other culprits are sugar and vegetable oils. Acid stress from too much sugar destroys collagen (which is one of the reasons for connective tissue breakdown), and vegetable oils damage the cell membrane, which dehydrates cells.

In addition, acid stress causes free radicals to be produced faster, and slows antioxidant activity, which results in much higher rates of oxidative stress. And, this also causes premature ageing

INFLAMMATION AND HEART DISEASE :

Too much acid causes inflammation, which then leads to chronic disease including heart disease, cancer, arthritis, colitis, pancreatitis, hypertension, and more. As I mentioned above, the free calcium that results from an over-acid system causes calcification of arteries and heart valves, which is a direct path to heart disease. I won't discuss every disease caused by acidity in detail, but hopefully this is enough to show how important balanced pH is. However, it is worth a detailed explanation of just one more. Cancer.

CANCER:

Once we understand how cancer forms and replicates, then it can become more straightforward to treat if it has not progressed too far. And, prevention is also straightforward. This is often hard to hear, especially for those who have undergone painful and traumatic cancer treatments, or for loved ones who have lost their dear ones to cancer. But, the more we spread the word, the more we can prevent tragic loss in the future.

A high carbohydrate Western diet makes the body extremely acidic. And, an acidic environment is conducive to tumour cell invasion and metastasis in cells. An acidic environment is a breeding ground for yeast and fungus, and their waste products are extremely acidic, which causes further acidity. In fact, cancer cells are very similar to yeast and fungi; actually, most of them are yeast and fungi, which is why an acidic environment offers the perfect environment for a cancer to start. Cancer specialist and researcher Dr Simoncini says, "Cancer is a mycosis; the bacterial organism is Candida Albicans...All solid cancer and malignant tumors are white in color. The white color is the Candida."

Research shows that increasing the pH into a slightly alkaline range causes cancer cell mitosis to cease and reduce the life of the cancer cell.

Alkalising the body increases the oxygen levels, which is intolerable to cancer. Once the pH is slightly above 7.4, the cancer cell becomes dormant. If the body can be alkalised to an even higher number of 8.5, the cancer cells die. 8.5 is not the ideal pH for long term health, however, reaching this level for a defined period is beneficial for killing cancer cells.

THE DEVASTATING EFFECTS ACIDITY :

I have a dear friend who is 50. Actually, I only recently learned she was 50; I honestly thought she was much older. She is only seven years older than I am. But, she is a classic case of an acidic system. She can barely walk from osteoarthritis. She has bone spurs and osteoporosis. Her nails are deformed from severe fungal infection (this comes from the internal Candida). She is heavily wrinkled, and has severe chronic fatigue. All of these are the byproduct of acidity.

If you think osteoporosis is a disease caused by not enough dairy, think again. We are pulling calcium from our bones! This is why we have an epidemic of osteoporosis. And if we are throwing calcium tablets in on top of it, we are adding fuel to another fire. Without a correct diet, we cannot get calcium where we need it, and it also builds up where it shouldn't be; heart valves and other places where it is dangerous for it to be. Vitamin K2 is an essential vitamin, which guides calcium to the right places such as bones and teeth. Not only that, it cleans the buildup of calcium from the places it is damaging, such as arteries. And, we have virtually eliminated vitamin K2 from our diet.

HOW TO BALANCE PH

• First thing in the morning, take a daily lemon drink (1/2 glass water with freshly squeezed lemon juice, lime juice, and 1 to 2 tsp apple cider vinegar). Use at least a 1/4 of a lemon and 1/4 of a lime. With severe acidity, increase dose and repeat during the day. 1/2 hour prior to meal time is best. Drink the daily lemon drink with a straw to protect your teeth from the acid.

• LCHF diet. For more information about what to include and avoid, refer to the next section.

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• Consume cultured dairy products, such as quality yogurt and cheese. Avoid dairy from the supermarket. Commercial yogurt is full of milk solids, which contain oxidised cholesterol. And, commercial cheeses are not traditionally cultured. Choose soft cheeses like brie, camambert, and gouda.

• Ensure you eat enough protein! If you are a member of my website, you can enter your height and ideal weight into a protein calculator, which will calculate your ideal protein intake for your size. For more information, refer to christinecronau.com/why-become-a-member.

• Mineralise the body by including quality salt, such as Himalayan.

• Daily breathing exercises (if required).

TESTING PH

To make things easier, here is the information again on pH testing. pH can be tested with simple testing kits. Litmus papers are the most common test, and contain a strip of yellow paper treated with a lichen dye, which reacts to differently to alkaline and acid solutions. However, litmus papers are not the most accurate indicator of how acidic or alkaline a solution is.

CONCLUSION:

The pH of our extracellular fluid can range much more, and will become extremely acidic on a typical western diet, which lowers our blood pH to the lower end of the spectrum, and severely restricts the amount of oxygen transported to our cells. If the body is in an acid state, and unfortunately most people are in an acid state due to our modern diet, then our metabolism changes; from an aerobic metabolism to an anaerobic metabolism.

In addition to changing our metabolism, pH imbalance causes acidic waste to be stored in fat cells, which causes weight gain. As we get older, we produce less hydrochloric acid, which is often when heart burn symptoms start occurring. The problem is not too much acid. An acidic environment is a breeding ground for yeast and fungus, and their waste products are extremely acidic, which causes further acidity.

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