



**Alkalize
to
thrive**

Brendan Brazier on why balanced pH equals speedier cellular regeneration and reduced risk of disease – and why athletes may be especially prone to running into pH problems.

When I began running track in high school I knew that I wanted athletics to be a regular part of my life. Soon after, I picked up swimming and cycling. It was at this point that I decided I wanted to become a professional Ironman triathlete. It was 1990 and I was only 15, but right away I began working towards making it happen.

Since an Ironman triathlon consists of a 3.2 mile swim, a 112-mile bike ride and a 26.2 mile run (a marathon), I realized that there wouldn't be much spare time in my new life. Knowing that I had a huge amount of training ahead of me, I wanted to make sure that I began with the most effective training programme possible. I looked at training programmes of some of the top professional Ironman triathletes in the world with the plan of mimicking their routine. To see what separated the best from the typical, I also looked at training programmes of average-performing amateur triathletes. What I found surprised me. The average athlete's programmes differed very little from the elite. If training discrepancies were minimal, what then caused some athletes to become great while others remained average?

As I discovered, training wasn't the only factor – far from it. In fact, the most significant difference between the upper echelon of elites and the basic moderately-performing amateur had nothing to do with training, but rather recovery times. As I learned, the difference between average and breakthrough performances hinged on the rate at which the body could recover from physical training. On reflection, this stood to reason. It makes perfect sense that since training is really nothing more than breaking down muscle tissue, the one who can restore theirs the quickest will have an advantage. The quick-recovering athlete will be able to schedule workouts closer together, therefore enabling him to train more than his competition. Over the course of a few months the extra workouts will translate into a significant performance gain. Having solidified this in my mind, recovery became my focus.

What has the greatest impact on recovery, I wondered. Diet was the answer. As I learned, food choices can account for up to 80% of the total recovery process. Having this new-found appreciation for diet, I decided to take

mine more seriously. I had never had any particular interest in nutrition before, but I now had a reason to learn about it.

Quick cellular regeneration is reliant on pH balance

A diet of predominantly alkaline-forming foods will keep the body in a considerably more alkaline state, and therefore one that promotes regeneration and healing. An alkaline state is essential for the repair and regeneration processes that need to take place on a daily basis for health to be optimized. If not dealt with, stress-induced acidity from physical exertion, general anxiety, or acid-forming food consumption can lead to, among other things: sleep impairment, mental and physical lethargy and the accumulation of body fat. If an acidic system becomes chronic, it can precipitate signs of aging, causing the blood and cellular tissue to degenerate at a more rapid pace.

When acid-forming food is consumed, it produces toxins that the body must deal with. This process starts with digestion and continues until elimination. Denatured foods are toxin producers; as a result, they have the greatest negative impact on pH balance within the body. These highly refined and processed foods are devoid of any usable nutrients, yet retain their calorific value – the worst combination. Toxins in the body lead to premature aging through cell degeneration. Aside from bad food choices, most prescription drugs, artificial sweeteners and synthetic vitamin and mineral supplements are extremely acid-forming.

As the body carries out normal functions such as movement and digestion, it becomes increasingly acidic. In fact, the formation of acid is a natural by-product of healthy metabolism. This is not a cause for concern, unless overeating causes this normal biological function to be taken to excess. This is yet another case for eating more nutritionally dense food – optimum nutrition with minimum metabolic activity needed. Not only do denatured foods instantly create an acidic environment within the body due to their chemical composition, but also due to their digestive shortcomings.

Natural, whole foods are the athlete's best, most alkaline fuel

It amazes me how little attention the value of balanced pH has garnered from the mainstream medical world. Positive acid/alkaline balance is one of the most important factors in athletic performance. In my opinion, by disregarding this fact, sports supplements manufacturers have

significantly reduced the effectiveness of their products. In fact, some of the 'energy bars' currently on the market are the worst offenders. Processed for maximum shelf life and convenience, and consequently denatured and acid forming, many energy bars are recommended by their manufacturers to be consumed after exercise to aid in recovery. Although some of the better-quality bars now available provide several of the nutrients needed for recovery, almost all are highly acid-forming. The lower quality ones are really nothing more than disguised junk food and act on the body as such.

Numerous sports supplements touted as post-work-out recovery agents contain highly processed, manufactured proteins usually in the form of denatured isolates, which are also highly acid forming. Suggesting they be consumed soon after a workout will certainly fulfil the body's need for protein, but completely neglect its need for pH balance.

Athletes in peak training are the most affected when it comes to acidosis. Vigorous exercise creates stress in terms of muscle trauma caused by the workout. Physiologically speaking, hard exercise is the stress. Equally important is the rest. The correct balance of these two contrasts are the combination needed for growth. Of course, as well as being physically stressed, many athletes also must deal with various types of performance anxiety. A higher metabolism is yet another factor athletes are met with, further lowering pH. Compile this with the fact that athletes require more food in general, with an emphasis on protein to aid muscle recovery. For recovery to be expedited, alkalizing foods, such as those rich in chlorophyll, need to be consumed soon after a workout. Protein must also be consumed to help repair broken down muscle tissue.

Protein quality is key

Based on personal experience combined with extensive research, I don't believe that we need as much protein as conventional guidelines would have us believe. Quantity can be greatly reduced, so long as quality remains first-rate. Whole, non-isolated, raw and plant-based of course are the parameters of what constitutes quality.

However, the conventional paradox is this: most protein sources are highly acid-forming, yet the highly alkaline-forming foods are generally low in protein. This can be simply overcome if protein quality is observed. Raw, unrefined, natural, hemp protein, for example, measures at

about 50% protein, yet is substantially less acid-forming than common denatured proteins such as whey and soy. Hemp's higher pH level can be attributed in part to its chlorophyll content, responsible for its green colour. Chlorella is another one: it is almost 70% protein and highly alkalizing. Raw, sprouted legumes such as lentils, beans and seeds are also an excellent source of alkalizing protein in the form of amino acids.

'Pseudo-grains' (technically seeds but often referred to as grains) are also a prime source of protein in amino acid form; they include amaranth, buckwheat, quinoa and wild rice. Daily consumption of these protein sources will supply the body with the building blocks it needs for regeneration, in addition to maintaining a healthy, alkaline internal environment. Also, a diet high in leafy green vegetables will ensure the system remains alkaline even when stress is elevated. In my book *The Thrive Diet* I include 100 recipes that follow this principle. They are ones that I've made for myself for years and work exceptionally well. They are all plant-based, wheat, gluten, soy and corn free.

A pH imbalance is a common trigger for many ailments

Those who maintain an acidic environment within their body are prone to fatigue. Since acidity is perceived as a physical stress, cortisol levels rise resulting in impaired sleep quality and therefore greater fatigue. The onset of fatigue will almost always result in cravings for sugary and starchy foods with the subconscious hope of them providing energy. Cravings of this type are a result of fatigue that has been brought about by more stress than can be physically tolerated. "Hunger" is often not really hunger, but rather fatigue.

Additionally, stress and the over-consumption of acid-forming foods and supplements is what leads to most cases of poor bone health and eventually osteoporosis – *not* failing to consume enough calcium, as is commonly believed. The blood itself will always remain neutral; this is imperative for survival. If the body is consistently fed acid-forming denatured foods and supplements, or encounters stress from other sources, it must take measures to ensure a neutral blood pH is maintained. One way in which the body does this is by pulling the alkaline mineral calcium from the bones. Of course, over time the bones will become weaker as a result of this survival mechanism.

The conventional way of treating low calcium levels and osteoporosis is to simply suggest the person "take" more calcium, usually in the form of tablets. The calcium source in tablets is generally derived from materials such as oyster shells, bovine bone meal,

coral and dolomite (rock), all of which are extremely hard and unnatural for the body to assimilate. The large size and recommended daily number to be consumed is a testament to their poor availability. The body must work very hard to get calcium from these sources – another reason this method of boosting calcium stores is inferior.

Low-grade metabolic acidosis, as it is termed, is another symptom of an over acidic body. It has been cited as a leading cause of several health concerns such as the development of kidney stones, loss of bone mass, and the reduction in the production of human growth hormone (hGH), which in turns leads to a loss of lean muscle mass and an increase in body fat production.

Since low-grade metabolic acidosis affects the body at a cellular level it is also responsible for an increase in the fabrication of free radicals, and a loss in cellular energy production. In addition to these serious concerns, viral and bacterial growth is able to thrive in an acidic body, possibly leading to a wide variety of diseases. For example, cancer cannot develop in an alkaline environment; it just is not possible.

Beyond diet, there's more that can be done to balance pH

Diet has the greatest impact of all on the body's pH level. However, there are other factors to be aware of. Air quality is one. Personality type is another. Some just seem to be intent on creating an environment for diseases to flourish. You know the ones: those who worry about things that they have no control over – weather for example. And those whose philosophy seems to be, "If there's not a problem, there's a problem."

Setting time aside to do an enjoyable activity on a regular basis will further instigate pH balance within the body. Taking time out of a busy schedule to do something pleasurable yet seemingly unproductive can actually be a key ingredient to improved health and longevity.

Other ways of creating alkalinity within the body are:

- deep breathing exercises
- yoga
- light stretching
- meditation

Regular exercise that gets the cardiovascular system pumping, but is not so taxing that it causes excess cellular damage, can also significantly reduce stress and therefore promote a more alkaline system.

If you think it's stressful, you're right!

Recreational activities are only beneficial

if you enjoy them. Enjoyment is, of course, a perceptual choice. This being the case, be aware that the way in which you perceive your chosen activity is of the utmost importance. If, for example, you don't like yoga, performing it in an effort to get healthy will have little value and, in fact, can actually create more stress that it alleviates. I enjoy running: that being the case, it benefits me more than someone who doesn't.

When selecting an exercise, consider your likes and dislikes, and aim to find one that suits your personality. This sounds like basic advice, and it is. Yet, many people participate in exercise programmes they don't find enjoyable, slogging their way through their workouts. If you force yourself to do daily exercise that you don't like, it will deplete your will power, making various challenges that crop up in life harder to deal with. Will power is finite and if you force yourself into an exercise programme that you don't enjoy, it will make meeting challenges in other areas of your life more difficult.

If you want to use exercise to clear your mind after a challenging day at work, a run or walk by yourself might be a good choice. If you want exercise to be your time of the day, away from others, solo activities are the way to go. If, however, you like the camaraderie and social aspect of exercising, choose an activity such as an aerobics class or circuit training. If you need motivation to exercise, arrange to work out with a friend: this will help get you into an exercise routine and encourage you to stick with it.

There are other considerations, too. Ask yourself if you would like a vigorous activity, such as boxing, or are you more suited to gentler movements, such as yoga? Do you prefer competitive activities to keep you motivated or is competition a turn-off for you? If you flourish with head-to-head competition, try tennis or squash. Do you like team sports and if so, do you prefer indoor or outdoor? There are as many activity choices as there are personality types. Check with your local recreation centre to see what it offers. You will be amazed at the diversity of activities available.

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