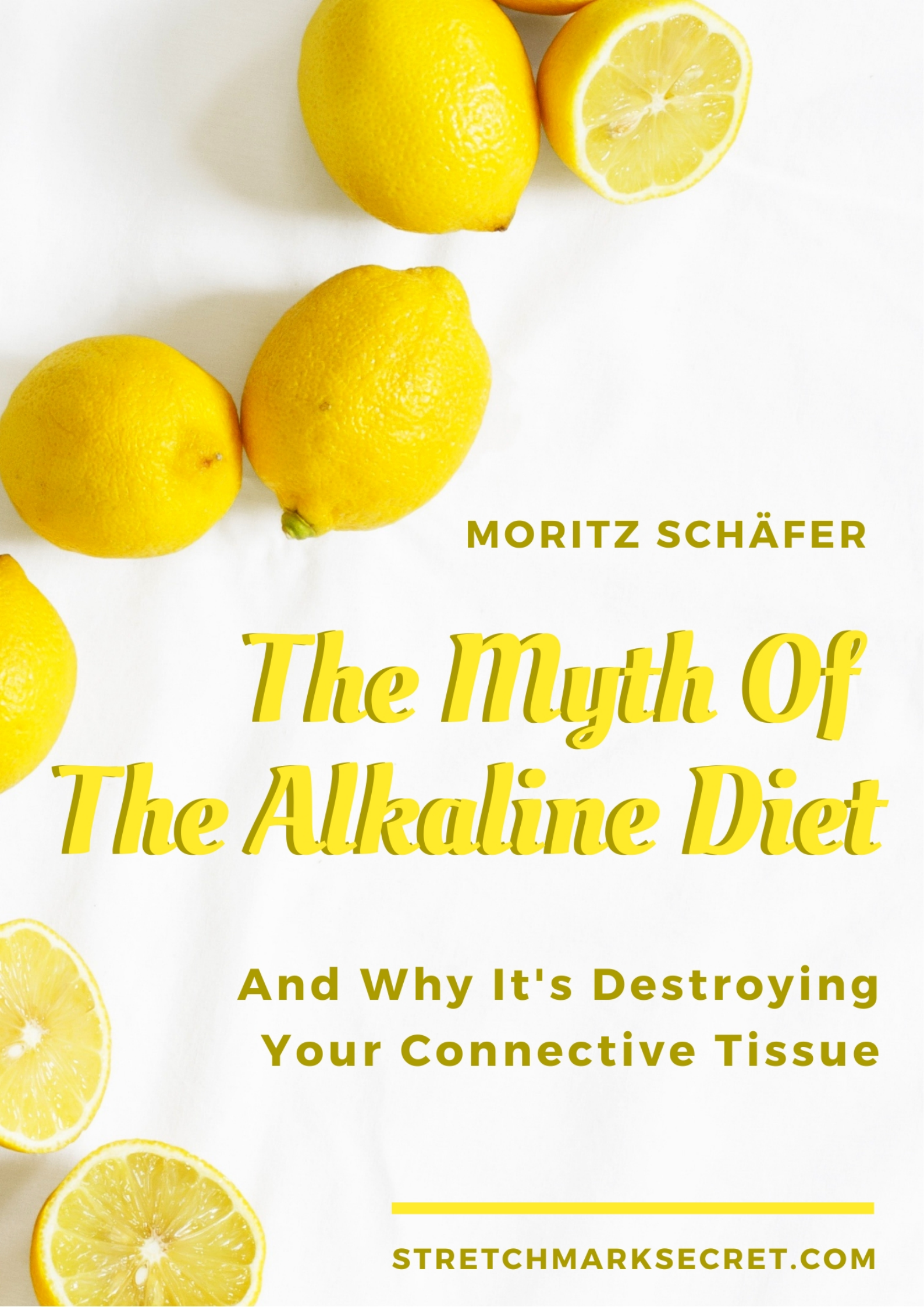




MORITZ SCHÄFER

The Myth Of The Alkaline Diet

**And Why It's Destroying
Your Connective Tissue**

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And Why It's Destroying Your Connective Tissue

Isn't it weird? Many health coaches these days keep telling you to ListenToYourBody™.

Nothing wrong with that. So far I agree with this advice.

However, when you actually *do* listen to your body, these same health coaches suddenly turn around and say: "Well, actually don't listen to your body. Instead, look at this nutrition plan that I just printed out for you and follow that one."

Confused? Well, let me show you what I mean.

Alright, picture this:

You bite into a lemon. What is the first sensation you feel? Remember, ListenToYourBody™. What does your body, or more precisely, your taste buds tell you?



Tooth erosion in the making

I'm pretty sure your taste buds will tell you something along the lines of: "THIS LEMON IS FRIGGIN SOUR, DUDE! IT'S BURNING RIGHT INTO MY FLESH AND MY TEETH! WHAT THE HELL ARE YOU DOING?! DON'T YOU SEE THE GRIMACE I'M MAKING? STOP EATING THAT LEMON!"

You don't need to be a good body-listener to pick up on this sensation. It's quite obvious what your body is trying to tell you: The lemon is sour as %&@§!

More precisely, lemons have a pH-value of 2, which makes them **100,000 times more acidic than your blood.**

But even though lemons are unmistakably sour, those health coaches will tell you that lemons are actually an *alkaline food*.

Wait - what?!

Then they will pull out their neat "acid-alkaline-chart" and present it to you. So you look at the chart and see that lemons are located on the "good" alkaline side, while meat and other animal products are on the "bad" acidic side.

But why? Can someone explain this?

You're in luck. Because this is exactly what I'm going to do right now. So keep reading.

To understand who came up with this acid-alkaline food chart, we have to go waaay back – more than 100 years – to the year 1913.

During that time lived a Swedish biochemist and nutritionist by the name of Ragnar Berg. (1873-1956)

Mr. Berg was really keen on studying the human body, particularly the mechanisms that keep its pH-value in check.

He focused on the question of *whether or not* (and *how*) food has an effect on this delicate balance.

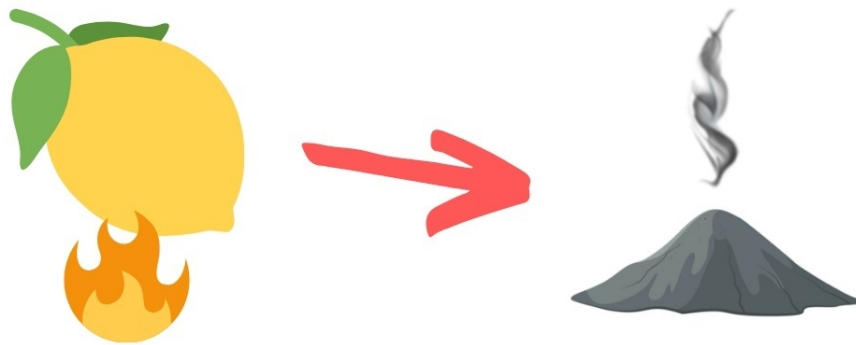
For his research, Mr. Berg conducted two experiments.



Ragnar Berg

Experiment #1:

He took various different foods and burned them. More precisely, he completely incinerated those foods until nothing was left but a small heap of ash. Then he analyzed the ash in his laboratory.



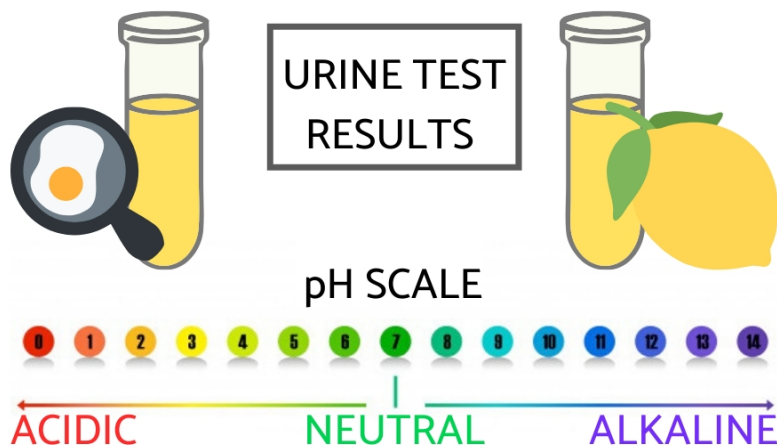
A lemon gets incinerated until only a small heap of ash is left.

The analysis revealed that the ashes of lemons and other plant foods contained primarily *base-forming minerals*, such as potassium, magnesium, calcium, and bicarbonate while the residues of animal foods (e.g. eggs) were mostly composed of phosphorus and sulfur, which are *acid-forming*. Remember the stench of rotten eggs? That's the sulfur.

To support his theory, Ragnar Berg also performed a second experiment.

Experiment #2:

Mr. Berg analyzed the urine's pH-value of his study participants after they had eaten either plant foods or animal foods. It turned out that after eating plant foods (even highly acidic ones like lemons) their urine became *alkaline*, whereas after a meal of animal foods (e.g. eggs) their urine was slightly *acidic*.



Acidic urine after egg consumption, alkaline urine after lemon consumption

Seems like a clean-cut case, right? That's also what Mr. Berg thought.

Plant foods leave base-forming minerals in both the ashes and the urine of the study participants, while animal products leave acid-forming minerals.

Based on these results, Ragnar Berg developed his diet recommendations and to this very day, this is still recommended in the mainstream.

But it turns out he made a cardinal mistake in not only one but *both* experiments.

Where Ragnar Berg Went Wrong

Mistake in Experiment #1:

Alright, we know that he burned the foods and then analyzed the ashes afterward.

Well, I don't know about you, but I have never eaten the ashes of food. I prefer eating the actual food itself.

So what happens when you incinerate a lemon or any food for that matter?

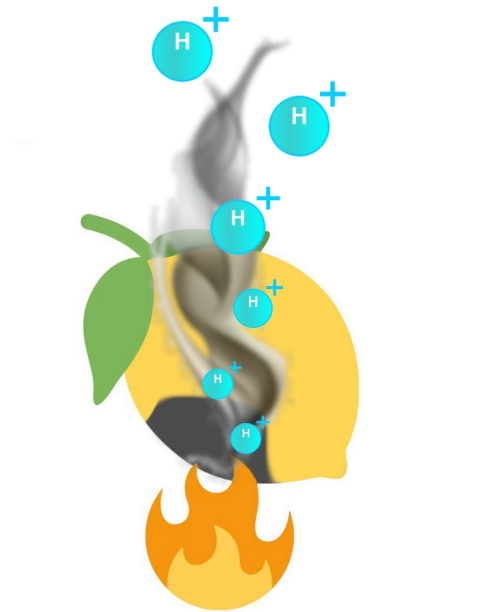
The first thing that happens is that all the water evaporates. And so does the acid. The substance that is responsible for the lemon's acidity is positively charged hydrogen ions.

When you look at other types of acids you will notice that they also have hydrogen in them (H = hydrogen).

- Citric acid is $\text{C}_6\text{H}_8\text{O}_7$
- Sulfuric acid is H_2SO_4
- Hydrochloric acid HCl
- Nitric acid is HNO_3

Most acids have these positive hydrogen ions which are responsible for the acidity. If you burn a sour food, not only the water but also the acidic hydrogen ions will evaporate.

It's true that there are some base-forming minerals in a lemon. But they are nothing in comparison to all the acidity that's coming from hydrogen.



Incinerating a lemon reduces the number of acidic hydrogen ions to zero.

So Ragnar Berg's analysis of the pH-value gave him a false-negative since all the acidic hydrogen had already been gone out the window.

This means that even though a lemon will give you a teeny-tiny amount of alkaline minerals it will also tax your body with a gigantic amount of acids. The lemon is *not* metabolized into alkaline byproducts like those health coaches want you to believe. Don't leave the hydrogen out of the equation. If you eat a lemon and not just its ashes the net result will always be a massive acid load.

The ash residues are *not* representative of the intact food.

But what about animal products? Aren't they full of *phosphorus* and *sulfur* and thus also acid-forming?

Well, it's true that burning these foods will release these acid-forming minerals. Once released from their molecular bond, sulfur and phosphorus can react with other substances and form *sulfuric* and *phosphoric acid*.

But again, you're not burning foods in your body, you *digest* them.

Even though we use the term "burning calories" that doesn't mean that there is literally a campfire inside our stomachs. Duh!

When we digest proteins we're not breaking them down to their elemental form like a fire would do.

Our digestion breaks down these proteins into *peptides*. The sulfur and the phosphorus within those peptides remain in a tight bond with their surrounding atoms. They are *not* released and can therefore not react with other substances to form acids.

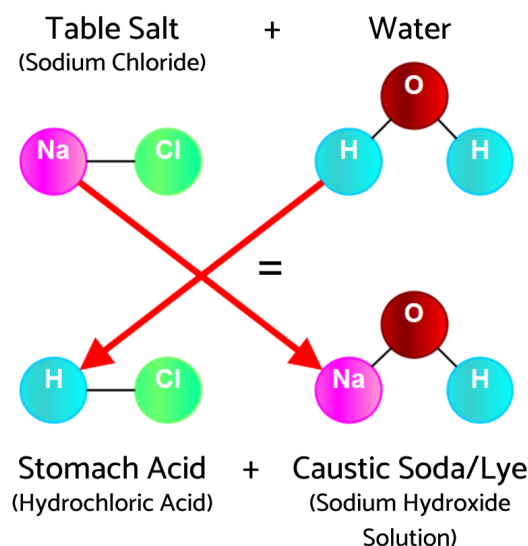
So no, animal products don't release acid-forming substances in your metabolism.

This whole concept is actually pretty easy and straight-forward: If it tastes sour, it is sour. A lemon doesn't magically become alkaline in your metabolism. There is no need to overcomplicate what our instinct is already telling us.

Many people use the counter-argument that when you eat a lemon it goes right into your stomach which is even more acidic. So why should anyone worry about this tiny amount of additional acid?

The problem with the additional acid from the lemon is that it disrupts the acid-base-balance in the body. Your body maintains a strict 1:1 acid-base ratio with water and salt.

The chemical formula of table salt is $NaCl$. Water's formula is H_2O . From these two substances, your body manufactures acids and bases (HCl and $NaOH$).



H=Hydrogen O=Oxygen Na=Sodium Cl=Chlorine

Your body uses this simple formula to keep this balance:

Salt + Water => Acid + Base

Table salt is just an example but there are also other types of salt your body uses to produce other types of acids and bases.

After creating the acids and bases your body then delivers them to different areas which either need an acidic or an alkaline environment.

Acidic areas:

- Skin (Sweat)
- Stomach
- Vaginal canal

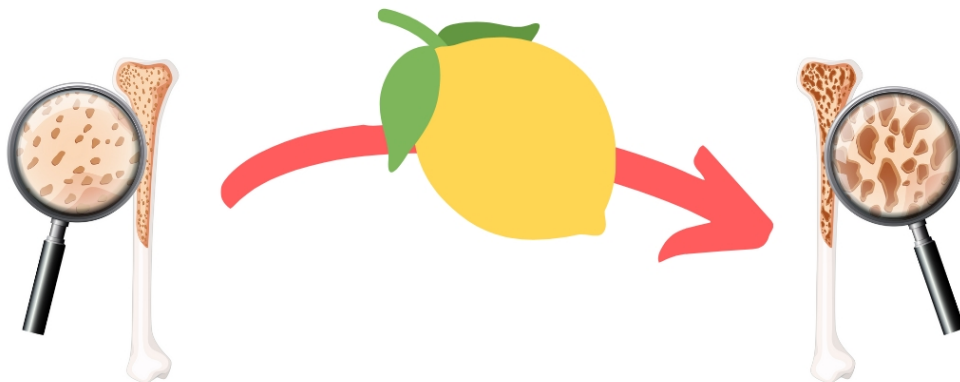
Alkaline areas:

- Blood
- Small Intestines
- Bones

When you add additional acids (e.g. eating a lemon) you will disrupt this balance. To restore this balance your body has to take alkaline minerals from its own storages to neutralize the acid overload and restore the balance.

And guess where your body takes those minerals from?

It breaks down your own bone tissue and connective tissue. Over time, this leads to the demineralization of the entire body which shows up as premature aging, wrinkles, hair greying, and overall lower bone density.



Acids will demineralize your body, despite what many health coaches are telling you.

But to make matters even worse, your body can't always get rid of 100% of those additional acids. This gives these acids the opportunity to react with other substances in your body and form new salt crystals. Some of the worst types of those salt crystals are *oxalates*, which are created from *oxalic acid*.

Oxalate salts are very tough and can accumulate everywhere in your body, such as the joints (leading to gout) or the kidneys (kidney stones are made up of oxalates). Not only that. They can also accumulate in the soft tissues, such as the labia. This can create a condition called *vulvodynia* that leads to painful sex for women.

Paradoxically, citric acid from lemons can break down oxalates. But why not just consume less oxalic acid (e.g. from spinach) and citric acid (lemons)? This way you don't get oxalate poisoning and also prevent losing minerals from your bones and connective tissue.

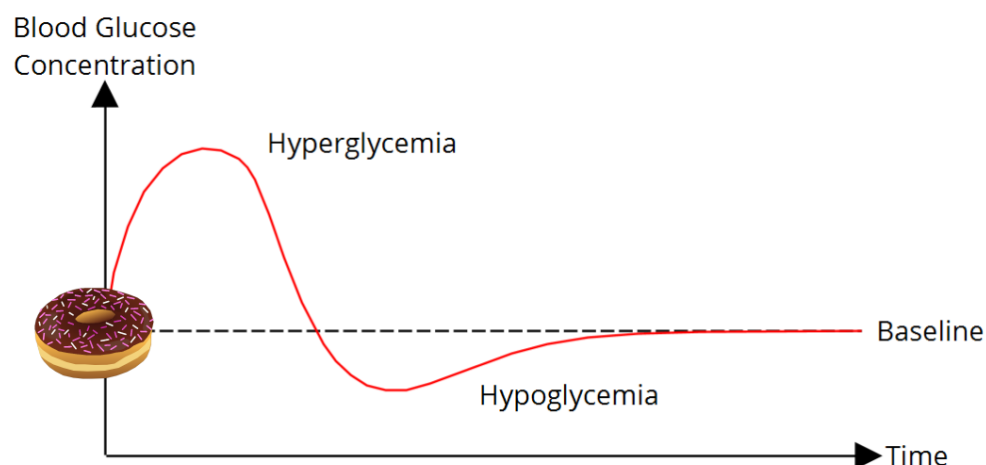
Now we can also understand why in Ragnar Berg's second experiment the urine of the participants became alkaline after the consumption of acidic foods.

As explained above, your body is always trying to neutralize an acid overload by cannibalizing its own mineral storages.

What's interesting is that your body tends to slightly overdo this neutralization. It will use more alkaline minerals than what is needed to get rid of the acids. This overcompensation happens because your body always wants to make sure to be on the safe side.

We can observe a similar phenomenon in the regulation of blood sugar. When you eat something really sweet your blood sugar levels will spike up. Shortly after, your body reacts with producing lots of insulin to bring blood sugar levels back to normal.

In many cases, this can lead to low blood sugar levels after a few hours. It's the same principle. The body overshoots the mark to make sure that all the excess sugar is stored away. This is known as *reactive hypoglycemia* and it often occurs after eating really sweet stuff, even in healthy non-diabetic people.



Eating sweets (e.g. a donut) leads to high blood glucose (=blood sugar) which is followed by low blood glucose due to the overcompensation of the body. The same happens when the body neutralizes an acid overload. The urine turns alkaline because the body sacrifices more acids than necessary to eliminate the acids.

Since your body is deliberately overshooting the target, you can bet that the alkaline minerals in the urine after eating a lemon don't come from the lemon itself but from your own body. These minerals get sacrificed to restore the acid-alkaline balance. Your body is cannibalizing its own mineral storages.

Animal products, on the other hand, don't have this effect on the body. After eating eggs or meat the urine's pH-value doesn't change. Slightly acidic urine is perfectly normal and nothing to worry about.

Side note:

*The same people who claim that animal products are acid-forming "because of the sulfur" are also the ones who promote **MSM aka organic sulfur**. I recommend MSM as well because it's great for skin health. But I'm consistent in my recommendations. The sulfur in animal products is organic sulfur (MSM) so you don't have to worry about any acids. Those experts who claim that animal products are bad while MSM is good don't know what they're talking about, since it's the exact same substance.*

Let's recap.

The first experiment led to false results because we humans don't eat the ashes of incinerated foods. We eat foods in their complete form, including the sour hydrogen ions in acidic foods.

The second experiment was false because the alkaline minerals in the urine stem from our own bones and connective tissue and not from the sour foods we eat.

Does this mean that everything about the concept of acid overload in the body is false?

The answer is: probably not.

Many conventional doctors claim that our body is automatically regulating its pH-value and that any fear of an acid buildup is all made-up alternative health nonsense.

And even though I've just debunked the alkaline diet, this doesn't mean that you can't suffer from an acid buildup inside your body.

I believe the truth lies somewhere in the middle.

Let's see if we can find any hints of acid buildup in the body.

Acute vs chronic acid overload

Everything you have read so far was about the so-called *acute acid overload* (not to confuse with acute acidosis, which happens when your blood pH suddenly drops). Acute means, the acids enter the body and are immediately removed.

But there is another type of acid overload that is far more sinister: *chronic acid overload*.

While acute acid overload is quickly neutralized by your body and only strips you of your minerals (making you age faster) and creates salt crystals, chronic acid overload is not always eliminated and can indeed build up inside your body.

In 1931, German physiologist Otto Warburg received the *Nobel Prize In Physiology Or Medicine* for his discovery in cancer research.



Warburg found out that there are two main differences between healthy cells and cancer cells.

Healthy cells are rich in oxygen and have an alkaline pH-value, whereas cancer cells are low in oxygen and have an acidic pH-value. This discovery is known as the *Warburg Effect*.

Dr. Otto Warburg

The question is: What makes cells become permanently acidic? Certainly not acids themselves, since they get excreted by the body, as we covered before.

It turns out; this chronic acid overload is caused by too much sugar. Sugar itself doesn't contain any acids. Actually, it also doesn't contain any other substances besides sugar.

Our old friend Ragnar Berg also noticed this. When he burned sugar to the ground there were no ashes left because 100% of the sugar evaporated and left no mineral residues. No minerals means no ashes.



Sugar doesn't contain any minerals. That's why it's called "empty calories."

Because of that, Ragnar Berg thought that sugar was neutral. But he was wrong yet again. Sugar is indeed acid-forming in the body.

But how does sugar lead to acid buildup in the cells?

In a healthy organism, the cells burn sugar with the help of oxygen. However, if too much sugar is present it can overwhelm the cells. When this goes on for too long the cells have to switch to a different way to metabolize the sugar.

This alternative metabolic process is called *fermentation*, and it happens *without* oxygen. Instead of *breathing* and burning sugar with oxygen, the cell is now *fermenting* the sugar without oxygen. This fermentation leads to the production of acids – and could increase the possibility of cancer cell formation.

Disclaimer: I'm by no means a cancer expert so I disclose that these were just my layman musings. I'm simply referring to the findings of the Warburg Effect.

Before you get scared of cancer cells, let me assure you that your immune system does an excellent job of killing off potential cancer cells. But I wouldn't push my luck. So keep sugar consumption to an absolute minimum.

Conclusion

What have we learned?

- Lemons don't alkalize your body. They are sour and their acids can break down your body tissues (bones, connective tissue).
- Animal products aren't acid-forming. In fact, they are neutral.
- Your body regulates its acid-alkaline-balance with water and salt. No need to eat additional acids in the form of sour foods.
- Other acids such as oxalic acid can form salt crystals in the body that can lead to kidney stone formation and build up in other tissues.
- Excessive sugar consumption can lead to fermentation processes in the body which creates an acidic cellular environment. So keep your sugar consumption as low as possible.

Side note:

This doesn't mean that you should never eat lemon juice. It's all about *how* you use it. Drinking water with lemon juice is not a good idea, even though it does help as a pick-me-up in the morning. But there are many other ways to increase your energy (e.g. improving your sleep quality). So there is no need to damage your body by drinking water with lemon juice.

However, you can use lemon or lime juice in other ways. If you squeeze a few drops onto an oyster or a fish fillet, it will pre-digest these foods and make the nutrients more available.

You can also use small amounts of acids to make bone broth. It's the same principle.

And finally, acids reduce the formation of dangerous AGEs which are created when sugar reacts with proteins during the heating process. So cooking and preparing your foods with small amounts of acidic foods can be very beneficial and protect you from AGEs.

If used correctly, you can make lemons and other acidic foods work for you instead of against you.



Use acids to break down your food instead of breaking down your own body tissues.

P.S.: One of the foods I mention in *The Guide To Superfoods* is the grapefruit. To make sure you don't overtax your metabolism with too many acids make sure to buy only red grapefruits which contain less acid than the white ones. Also make sure to get them as ripe as possible, since this further decreases their acid content.

P.P.S.: Another food in *The Guide To Superfoods* are beets, which are quite high in oxalates. So if you suffer from oxalate poisoning (e.g. kidney stones) you shouldn't eat beets. But there are many other great superfoods in the guide you can choose from.

P.P.P.S.: *The Guide To Superfoods* is part of *The Stretch Mark Secret Program*. You can get the whole program at stretchmarksecret.com