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# **The Acid-Base Regulation and Dentistry**

## **Is Caries only a Problem which Involves Fluorine and Cleaning Teeth?**

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The lifestyle of “modern“ people brings the consequence of excess acids in the body. There are many causes for this, the most important ones being the change from predominantly vegetable foods to predominantly protein foods, with simultaneous slow-down of motions. In the beginning, the consequences of this hyperacidity were not recognized or considered, as such.

*Sander* and his students, such as *Biedermann*, *Rumler*, etc. have specifically described the daily fluctuations of the acid-base levels in the urine. These values were established by titration and they indicated a regulation expressed from chemical perspectives in amounts of weights and equivalents. The essential points were the sums of acid or base forming minerals. In order to indicate *Sanders'* most important discovery - the significance of the splitting apart of hydrochloric acid for the acid-base equilibrium - the following brief quote is offered herewith:

“...The excess-acid deposits in the connective tissue are made capable of passage into urine through their binding to mineral salts for their excretion. A disturbed acid-base equilibrium, in conjunction with neuro-hormonal dysregulation, leads to chronic-inflammatory conditions of the mucous membranes in stomach and large intestine, or even ulcers in these areas, through increased excess-hydrochloric acid because of increased splittings of sodium chloride. Sooner or later, this inflammatory condition can lead to irreversible damages of the border cells, the mucous membrane of the stomach and, later on, to a chronic

deficiency in hydrochloric acid or to the complete absence of hydrochloric acids in the stomach (Achylye). This development more or less strongly restricts the formation of sodium-bicarbonate. The result is pathologic congestion of excess-acid metabolic slag in the tissues with a tendency toward rheumatic diseases or the formation of stones in gall and kidneys, etc...”

### **Danger of excess acidity pointed out**

The danger of hyperacidity became known by the examinations according to *Sander* although they could not be undertaken in practice due to exorbitant costs. Especially *Biedermann*, *Rauch*, *Rumler*, and others have continually and expressly pointed out that there should be a balance between acids and bases in nutrition. *Rumler* has worked out explicit tables for a patient's selection of meals with consideration of acid and base forming foods.

*Rumler* has proven that difficulties come about in maintaining a normal pH-value if a diet contains too many acid-formers (including animal proteins). This fact is not so much relevant to the pH-value of the blood but of the ground-(basal) system, according to *Pischinger*. On this point, *Rumler* has calculated that, to balance out a certain amount of meat, a sevenfold weight of vegetables is required, which is surely not the case in today's average diet.

### **Neutralization of acids requires mineralia**

The organism requires minerals for the neutralization of excess acids.

For this purpose, a certain reserve of bases is available from the blood which, however, must always become replenished. First of all, base-formers which are stored in the tissues are utilized. However, if over-acidity also prevails there, the final reserves must be broken into. Calcium in bones and teeth plays the most important role, because it represents the largest pool for mineral substances.

The organism must make use of all possible means to fulfil the superior task of maintaining the genetically fixed blood pH-value of 7.4. Thus, it is not surprising that people with hyperacidity first use up their movable mineral reserves, and subsequently, “use up“ their skeleton. In this way, the quality of the teeth and skeleton becomes reduced.

### **Acidosis as a multiple fundamental cause**

Nowadays, *Kern* and others stimulate the discussion in arteriosclerosis research (heart infarct, apoplexy, gangrene in the leg, etc.). They give established proofs that the foundation of these developments in the form of ischemic conditions in particular muscles or brain areas lies in locally excessive acids. These quoted conditions also cause problems in gnathology, in myotendopathia and in bruxisms. *Kern* describes these insights as being “the change-over from a belief in sclerosis to the wisdom of acidosis.“ He shows that in case of a damaged myocardium, the oxygen utilization is disturbed and can be restored with strophantien. A cardiac infarction, as also apoplexia, goes back to three



causes:

- general acidosis (in the Ground-System of *Pischinger*)
- local tissue acidosis
- acidotic rigidity of erythrocytes.

Naturally, acidosis is not found in the blood where for a long time it was searched for, but in the tissues where acids have just formed but fail to be removed from there due to ischemia. This creates a *circulus vitiosus*. Various tissues have different sensitivity toward acids, and the left heart and brain are correspondingly endangered.

*Kern* writes: “Through deacidification measures, apoplexias and their developmental stages can be safely and happily prevented since 1978, and cardiac infarctions with their developmental stages likewise, since 1928, through the myocard-deacidification strophantien-therapy according to *Edens*.” On the basis of these experiences and considerations, *Kern* faces the chemical determination of acids and bases according to their total amounts (weights) sceptically, because many acid remnants are already bound and harmless in the sense of excess-acids. He assumes that the problem in the tissues is caused by the excess of free acids. The pH-value of the urine is a measure for the degree of the acid-base situation, because excesses from an imbalance are immediately recognized as “waste” and, therefore, not reabsorbed by the kidneys.

However, secretions, such as saliva, perspiration, etc. are different because their production is purpose-bound and they somewhat distort the acid-base-proportion in

some as yet unknown way. With limitations, they are sufficient for measurements, but not as good as urine. To obtain answers to these questions in a more personal experience, I undertook a self-experiment before I began working with my patients.

### Observations during a fasting cure

During a fasting cure according to *F.X. Mayr*, I undertook pH-value measurements of the urine. One of the best known and most valued criteria of this cure is the strong elimination of acids followed by the disappearance of previously bemoaned joint problems in the patient. These acids are mainly periarticular acid deposits. With the modern measuring strips, which indicate even very narrow limits by their changes in coloring, today’s pH measurement is no longer as difficult as previously. Even minor changes in the pH-value are indicated. I used the MD-indications-paper by *Madaus* for this purpose.

During my cure, I did measurements soon after rising in the mornings, at 10 a.m. (this is two hours after the morning cure bun), and in the afternoon, at 4 p.m. (two to three hours after the noon cure bun) because of postprandial base flooding, according to *Sander*. However, the latter might not occur overwhelmingly during fasting times. In the second week of fasting, the morning measurements of the urine always still showed a pH-value of 6.5. This was brought up to 7.0 with two teaspoons of ALKALA by SANUM-Kehlbeck in the course of the day, and later to 7.5. In this very simple way I was able to check

the influence of diverse food substances on the pH-value of the urine during my subsequent build-up to normal nutrition.

### Good therapy assistance through daily measurements

Due to this nutritional experience, and for several other reasons, I decided to prescribe such pH-measuring strips to my patients whenever there was a suspicion of excess acid, and gave them a list for entering their measuring results for one week. Illustration 1 shows the format of such a list.

Simultaneously and without any difficulty, the patient can also measure the pH-value of the saliva and enter it, as shown on illustration 1. From this, I try to gain an overview of the acid-base condition of my patient, and his regulatory capacity for the maintenance of the acid-base equilibrium. At first, the pH-value of the saliva merely points out the oral milieu; but later on, after longer experience, other hints to connections may arise.

The morning urine of “acid” patients should be brought up to 7.5 through taking alkali, such as ALKALA from SANUM-Kehlbeck. Because of the poor circulation, deacidification of the acidotic tissue cannot be reached otherwise. If this appears too risky for a dental practitioner, he should make efforts in finding a suitable internist for cooperation. Often, this is rather difficult.

It should be hinted here that the acid-base economy does not exist by itself. First of all we are dealing with a biochemical process, or



Patient \_\_\_\_\_

Age \_\_\_\_\_

Date \_\_\_\_\_

Date	Time	Urine	Saliva	Date	Time	Urine	Saliva
	7 h						
	10 h						
	16 h						

Illustration 1

rather, a condition of balance, but one must not forget that this, too, has its correspondences in other planes, such as energy and psychologic. The German saying that someone is “sour today“ or “responding sour“ (meaning “moody“) shows this connection.

Thus, even uric acid diathesis is not primarily determined by nutritional chemistry but by the habits of the total being and its fundamental tuning.

These considerations are important, especially when dealing with prophylaxis, which should naturally not exhaust itself in the administration of minerals. Living conditions— such as daily agitations, stress, smoking and other addictions, self defeat, lacking self respect – which are contributory to hyperacidity and cardiac infarcts have to be improved, such as nutrition and fattening through animal protein. This reveals natural ways for prophylaxis and prepares for lasting success on a higher level. All this concerns dentistry only slightly, but should light up the background. In the long run, one is not satisfied even in dentistry with mere substitutions, as visible everywhere.

### Dental hygiene and acid-base equilibrium

Effective dentistry is also to be looked at from this perspective.

According to current understandings of medicine, caries is not just a simple brushing problem - as traditional medicine in general, and parodontology in particular, tend to represent it - but like all chronic diseases, it is conditioned by multiple factors. Some of the easily noted causal factors are:

- excess of acid in the organism
- disturbed oral milieu with wrong pH and dysbiosis
- a possible organic stress (or several) via the energy path of meridians which may be thought of as locus minoris resistentiae in the subtle energy supply of the mouth.
- the local, “mechanical-chemical“ development of caries which is conditioned by plaque and bacteria. However, the bacteria are not the cause but the sequence to changes in the milieu. It is very likely that plaque is an analogy to caries and not its cause.

Readers who possibly consider this as “hair-splitting“ (because every cause can again lead to another cause - and so on), must not mistake the great significance of the fact that we must always establish our therapy from the uppermost cause. Otherwise, one might easily treat against the wholistic core of all organic processes, for which the past development of medicine offers

an abundance of inglorious examples.

A practical example for this is the excessive emphasis on cleaning teeth. Instead of taking the indicated background factors into view, we chiefly take care of the application of fluorine and the removal of plaque. Thereby, we damage the oral milieu with nonbiological toothpastes causing lasting dysbioses. On this topic, a quotation by *Abele*, from the publication “The Natural Doctor“ (Issue 9/1988) from an article about oral virus infections:

“... whereas one must say that the preponderance of such microbic life-forms within a normal oral flora always represents a sign of a weakened self-regulation. Most people use disinfectants for years and thereby ruin the flora in the cavity of their mouth. For instance, if you use a fluoride-containing toothpaste with foaming agents and spit just once into a water-butt, it suffices to kill all small lifeforms in it.“

### Hygiene of the mouth is more than tooth-brushing

In connection with our theme, it must be clearly stated: the mechanical aspects of oral hygiene - that is, toothbrush, dental floss, oral douche, and others - are sensible and useful, but the diverse



chemical products are not so. The chemically caused damages through toothpastes, mouth-rinses, etc. - not only for the oral milieu but also for the remaining digestive organs - can nowadays not even be estimated in their total impact.

As such, we know distinctly that neither toothpaste nor fluorine constitute any causal therapy, yet these recommendations are continually repeated by official dentistry. What can all this mean? On one hand, traditional medicine wants to know nothing about experiential healing science, on the other hand, the application of fluorine is based on experience, drawn from accidental statistics, without inquiring after any genuine causality.

In this connection, also sugar consumption must be criticised. Instead of drastically limiting sugar consumption, official dentistry seems to believe that caries can be avoided by tooth brushing after each sugar consumption and also by fluorine medications. One often overlooks that particularly the intake of white sugar or of refined flour causes great damage to the entire organism.

Thus, it is a general fact of experience that the formation of intestinal mycoses is promoted by habitual sugar intake over a long period of time; this also shifts the acid-base equilibrium toward the acid side. Additionally, the factory sugar must be seen quite generally as a robber of vitamins and calcium from the organism (on this: *Bruker, Glaesel, Meede, Kinon, Volkmer* etc.). Therefore, it is not merely insufficient, but actually misleading,

to recommend to the patient tooth-cleaning and fluorine for prophylaxis.

Especially, the resulting diseases are neither seen in their causal connection after many years nor properly treated.

Therefore, a general question must be asked of Official Medicine: "How much longer can we try to resolve the mistakes of yesterday, today, and tomorrow, with new and other mistakes?" The only correct approach to false knowledge/ignorance can only be to explore just how the regular processes occur in nature, and then adapt one's therapy to nature's course. This means that the therapy form is to be preferred which adapts itself best to the natural course. Disinfective toothpastes and mouth rinses do not serve this purpose.

### **Correct nutrition is of prime importance**

Everyday life shows the practical relevance to these problems of nutrition as the chief factor which decides upon one's health, including the health of the teeth and the mouth. Two more quotes make this clear. Although they do not entirely match, they harmonize well in their message: *J. Karl* explained in the periodical *HP-Kurier* 2/1988:

"...If a person e.g. eats a significantly larger amount of meat, eggs, cheese or other acid foods than the body requires, the excess acids occurring through the protein metabolism may be eliminated either:

a. through neutralization with the bases present in the additional foods (fruit, salad, milk, potatoes, vegetables), or

b. through combination with bases which have been retained in the blood from past meals, or finally  
c. through extraction of bases from tissues, organs, bones and teeth (for instance, calcium).

"If all base reserves are exhausted, then the acids inevitably remain in the blood, until a fresh intake of bases makes the neutralization possible. But if one's nutrition is excessively acid over a long time, this leads to a number of diseases typical for this condition: rheumatism, neuritis, stone formation in gall and kidney, diabetes, high blood pressure, dental diseases, etc.

"The most important predominantly base foods are: fruits, leafy vegetables, root vegetables, vegetable fruits, stalk veggies (except asparagus), onions, garlic, potatoes, chestnuts, raw milk, yoghurt, sour cream, soybeans and their products, vegetable broth, egg-yoke, herbs.

"The most important predominantly acid foods are: meats, fish, fowl, game, sausages, inner organs, (liver, kidney) egg-white, cheese (the sharp kind more than the mild), legumes (peas, lentils, beans, especially dried ones) asparagus, artichokes, Brussels Sprouts, peanuts.

"Acid formers are: white sugar, white flour and its products (white bread, rusk, cookies, fine pastry, pasta, wheat-farina), oils and fats, especially when hardened, refined or heated, stimulants such as coffee, black tea, chocolate, alcohol.

"The following hold an approximate



<b>Basic</b>	<b>mval:</b>	<b>Acid</b>
White beans (fresh), green peas, cabbages: green, red, savoy, rutabaga, pumpkin, horse radish, green paprica, water melon, onions, champignons, garlic, apples, pears, berries: strawberries, blueberries, currants, cranberries; sour cherries, buttermilk, whey, yogurt, horsemeat.	1 - 3	Millet, dried peas, hazelnuts, almonds, waternuts.
Cauliflower, broccoli, white cabbage, watercress, endive-salad, chicories, radishes, black radish, sauerkraut, tomatoes, chanterelle, pineapple, apricots, bananas, blackberries, raspberries, black currants, dates, grapefruit, sweet cherries, peaches, plums, grape-juice, lemon-juice. Milk from women, cows, sheep, goats, skim milk; sour cream, heavy cream blood.	4 - 6	Simonsbread, rusk, peeled oats, cornstarch (Mondamin), corn flakes, ricestarch, artichokes, cranberries, lard, Camembert, Emmentaler, Limburger, Parmesan, creamcheese, codfish.
Cucumbers, potatoes, kohlrabi, leeks, lettuce, celery leaves, chives, chicory roots, sugarbeets, oranges, wild plums, gooseberries, grapes, sweet chestnuts.	7 - 9	Army bread, white bread, husked wheat, walnuts, margarine, eggwhite, goose, calf (boiled), calf-heart / liver / kidney and tongue, mutton, eel, trout, flounder, halibut, lobster, salmon.
White beans (dried), leek-leaves, carrots, red beet bulbs, celery bulbs, Maybeets, Topinambur, dried hips.	10 - 15	Bread made of rye, wheat, barley; oatflakes, rice, rye, pasta, wheat grain, horse beans, Brussel sprouts, palm butter, hare, rabbit, pork, ham, pike, river salmon, lemon sole, tench
Molassis, dill, dandelions, mandarines, spinach.	16 - 20	Unhusked rice, dried lentils, peanuts, Brazil nuts, quark (lean and rich), hand cheese, pike-perch, eggyoke.
Dried fruits (raisins, figs, dates, bananas, etc.), olives.	over 20	Barley groats, barley (malt germs), duck, chicken, calf, roe, red deer, uncooked beef.



acid-base equilibrium: nuts (freshly harvested), fresh legumes with pods (green beans, sugar peas, etc.), millet and its products, whole-wheat bread and products, whole-wheat pasta, wheat germ, fresh butter.“

To this quotation, the following comments: The blood only becomes overacidified when no minerals are available for buffering - and that rarely happens. The body considers its prime task to be the maintenance of the genetically fixed blood pH-value. To serve this purpose, it can draw bases from the tissues, or it can store disturbing acid molecules in the ground system (*Pischinger*), when the elimination is insufficient. By this, chronic acidosis symptoms develop, about which *Karl* writes.

The second quote involves a table for nutritive value by *Rumler*, as reprinted in the following. It offers a summary of excess-acid and excess-base foods. These foods are arranged in this table according to excess-base (B), or their excess-acid (A), and in both categories they are again arranged in groups according to degrees of excess.

Excess-acid or excess-base means the difference of the sums of base-forming (Sodium, Potassium, Calcium, Magnesium, etc.) and the

acid-forming (Phosphorus, Sulpur, Chlorine) mineral substances, listed in chemically comparable weights (equivalent weights), be it in Millival (mval) or in ccm normal-acid or normal base, corresponding to mval. If, e.g., spinach weighing 100g fresh, contains 23.3 mval base-former and 6.4 mval acid-former, then it has an excess-base of  $(23.3 - 6.4 =) 16.9$  mval, corresponding to 16.9 ccm normal base. Turned around, if eg. 100 g raw oatmeal has 24.0 mval base-formers and 37.4 mval acid-formers, then an excess-acid amount of  $(37.4 - 24.0 =) 13.4$  mval, corresponding to 13.4 ccm normal base. The excess in acid or base cannot be recognized sensually but can be established only by chemical analysis.

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