What is the reason for the over-acidification of the body and our sour mood?

Acids released during metabolic processes in our body are highly reactive and toxic to our cells and must be promptly balanced via the kidney-lung-stomach buffer system or eliminated from the liver-bile detoxification system. *(p.22,45,52,59,61,73,75,127)* Acidification of body fluids can occur with emotional stress, toxemia, immune reactions and as a result of any process that depletes oxygen, minerals, and antioxidants and creates toxins. *(p. 27,33,47,49,51,54,60,68,70,85,162)*

Excessive consumption of acid-forming foods, irregular lifestyle, exhaustion, frequent changes in diet, starvation, overeating, immobilization, sleeplessness, regular intake of antacids, antidepressants and psychotropic drugs, painkillers and other medications, produce systemically reduced pH values in individual organ systems and tissues, while our stomach tries to keep the pH value of the body fluids in the normal range with the help of the liver, bile and pancreas. This is how we exhaust our life energy. *(p.55,57-58,64-65,71,73,76,106,112,122,128)*

What are the main acids that "are trying" to change the pH balance of body fluids?

Metabolism at the cellular level itself is the oxidation and reduction of substances, their absorption in the form of energy and the disposal of metabolic wastes. During the normal cellular exchange of oxygen and energy, acids are part or waste product of these processes: *(p.22,43,61,71,73)*

• **Carbonic acid,** which is formed by the interaction of carbon dioxide generated in the tissues and water, due to the metabolism of carbohydrates. Carbonic acid is weak and in most cases has a neutralizing effect on stronger acids in the body. *(p.72-74)*

• **Sulfuric acid,** which is formed during the oxidation of proteins, digestion and metabolism of meat, eggs, dairy products and other animal proteins, where the main precursor in this process is the amino acid cysteine. *(p.43,51,77,169)*

• **Phosphoric acid,** formed during the oxidation of phosphoproteins (milk casein, cheese and yellow cheese), as well as phospholipids of meat foods. *(p.51,77)*

• **Lactic acid,** which is formed during anaerobic glycolysis - in the muscles during intense exercise, but also in the course of metabolism and fermentation of carbohydrates in the intestine. Lactic acid is synthesized in excess also with elevated levels of the stress hormone cortisol, caused by insomnia or night shifts, regular intake of alkalizing agents, excessive consumption of sweets and pastries. Lactic acid is mainly deposited in the lymph and slows down its circulation, causing lymphatic stagnation. *(p.33-35,45,47,55,61,78,90,162)*

• **Uric acid**, which is formed during the absorption of purines from meat and legumes, but also during the breakdown of proteins during intense exercise and diets for weight loss. Uric acid, in most cases, neutralizes highly reactive acids and plays a balancing role in the alkaline-acid biochemical balance in the blood. Purines are the main alkaline protein molecules that balance nucleic acids (ribose, deoxyribose) and phosphoric acid residues in the structure of DNA and RNA. Therefore, drug suppression of uric acid synthesis should be avoided at the expense of regulating diet and regimen. *(p.22,54,64,74,169,186)*

• **Bile acids** produced in the liver and bile, which are alkaline but change their acidity during the entero-hepatic cycle. **The natural bicarbonate secretion** in the gallbladder regulates the pH of the bile and neutralizes the toxicity of bile metabolites, which are formed by the resynthesis of bile acids in the colon after a meal. **Impaired bicarbonate protection** increases bile toxicity and can occur as a result of impaired diet, dietary errors, sedentary lifestyle, excessive emotionality and irritability, in cholestasis - blocked bile ducts. *(p.33,47,51,54,57-59,60,66,73,78,109,111,129,132,143)*

The body will try to neutralize these acids by applying buffer systems and agents, and by accumulating alkalizing minerals (calcium, magnesium, sodium, chlorine and potassium) in the gastrointestinal tract. **The natural bicarbonate secretion** of liver, bile, pancreatic and gastric cells plays a major role in this regard. Therefore, it is important that this function is not replaced by antacids, which subsequently suppress it, but to be regulated and stimulated through proper diet and balanced nutrition. If the diet does not contain enough of these minerals, and the lifestyle exhausts the natural defenses, acids will accumulate in the tissues, which will deplete oxygen. In such cases, to compensate, the vital minerals available are extracted from the bones and teeth. *(p. 42,51,55,71,73,79,96,98,102,110,111,122,125,129,162,166,169)*

SIGNALS OF ENERGY IMBALANCE IN THE STOMACH AND IMPAIRED IMMUNE PROTECTION, CONSEQUENCE OF PSYCHOLOGICAL AND DIETARY ERRORS. METHODS FOR REGULATION OF ALKALOSIS AND ACIDOSIS

ALKALOSIS: pH ›7,45	ACIDOSIS: pH‹7,35
Alkalosis occurs when the concentration of hydrogen ions in the arterial blood plasma decreases and the pH is higher than normal 7.45. In such cases, the blood is alkaline. *(p.71)*	Acidosis occurs when the concentration of hydrogen ions in the arterial blood plasma increases and the pH is lower than the normal 7.35. In such cases, the blood is acidic. *(p.72,121)*
Metabolic alkalosis	Metabolic acidosis
Alkalosis conditions are observed with increased oxygen content, *(p. 121)* decreased levels of carbon dioxide in the blood and retention of bicarbonate (HCO3−). Metabolic alkalosis can be caused by hyperventilation - increased oxygen intake, but also by frequent vomiting, with the discharge of hydrochloric acid (HCl) along with gastric juices. *(p.51,74,132)* **Excessive intake of alkalizing agents** (antacids, baking soda, including antihistamines and inhibitors of gastric secretion of hydrogen ions, taken for peptic ulcers and to neutralize acidity in the stomach), also leads to increased alkalinity in the blood. Metabolic alkalosis is often accompanied by **low potassium in the blood**, characterized by muscle weakness, pain, cramps and spasms. *(cmp.42,51)* Under conditions of alkalosis, the cells absorb potassium from the blood, and with an extreme increase in the concentration of bicarbonates, potassium is excreted in the urine along with the bicarbonates. Amino-glycoside antibiotics prescribed for acute urinary tract and respiratory infections, sepsis, abdominal, streptococcal infections, can also cause metabolic alkalosis with low blood potassium levels. **Decreased calcium in the blood is also a specific sign of metabolic alkalosis.** Increased alkalinity ionizes transport proteins, such as albumin, and they quickly bind to circulating calcium in the blood, which can affect normal kidney and heart function. *(p.35,42,45,51,60,73,77,79,84,95,115)* **Dehydration of the body also leads to metabolic alkalosis.** Increased water loss through urine, vomiting or profuse sweating reduces fluid and increases blood alkalinity.	**Renal acidosis** is associated with an increase in urea and creatinine in the blood due to difficulty in the kidneys to neutralize acids from protein catabolism. *(p.44,53,5473,95,127)* **Lactic acidosis** can occur due to various reasons: lack of enough oxygen in the blood (hypoxia), rapid heartbeat, shallow breathing, starvation, intense exercise, immobility, shock, fear, **excessive intake of simple sugars**: dextrose, fructose, lactose , refined sugar, frequent consumption of milk, fresh cheese, kombucha, which contain **high levels of lactic acid**. Lactic acid is also formed during the **anaerobic fermentation of carbohydrates in the large intestine**, where it is needed by the intestinal flora (lactobacilli). *(p.78,127)* **In normal glucose metabolism,** cells produce water and carbon dioxide with the help of oxygen to obtain the energy currency needed for cellular metabolism (ATP - adenosine triphosphate). *(p. 45)* **Lactic acidosis occurs in conditions poor in oxygen**, when cells do not have available energy - ATP and to obtain it cause a process of glycolysis (burning of carbohydrates). **Glycolysis generates large amounts of lactate,** which in the absence of oxygen (in conditions of hypoxia) ferments and turns into lactic acid, and in some cases turns into ethanol, which evaporates easily. *(p.54,74,127,162)* **Lactic acid is difficult and slow to neutralize by the body's buffer system,** as lactate releases hydrogen ions, which bind to bicarbonates in the blood and form carbonic acid (H_2CO_3), which is partially neutralized by the respiratory chain by converting it to water (H_2O) and carbon dioxide (CO_2). *(p.45,54,73,78,132)*

Fluid loss can also be caused by various diuretic therapies due to **high sodium excretion**. *(p.51,132)* **A common cause of metabolic alkalosis is bicarbonate retention**. Increased alkalinity can also cause **increased activity of the enzyme alkaline phosphatase**, which **inhibits the natural bicarbonate** secretion of liver, bile and stomach cells. This often causes the secretion of peptic acids, the cause of peptic ulcers. *(p.54,71,111,119,122,126,171)* Elevated levels of this enzyme usually occur in early childhood and during pregnancy, and in other cases may indicate hepatic and biliary steatosis, **disorders of bone metabolism** and renal function, tumor and autoimmune processes. *(p.41,49,54,79,84,95,102,106,110,190)*	**Lactic acidosis** is also caused by emotional hormones - cortisol and catecholamines: adrenaline, dopamine, norepinephrine, illness, stress, physical and mental exhaustion. *(p.33,61,90)* **Ketoacidosis can occur when blood glucose is depleted due to glycolysis**, prolonged starvation, malnutrition, or the preferred consumption of fats and proteins at the expense of carbohydrates. **In such cases, the body begins to synthesize the energy it needs through lipolysis** - the breakdown of fatty acids in the blood, whose waste products are strongly acidic ketone bodies (acetone), which the kidneys normally neutralize through ammonia in the urine. The metabolic disorder of k**etoacidosis** is common in people with diabetes. *(p.53,73,78,149,159,163,159,190)*
Respiratory alkalosis *(p.74)*	Respiratory acidosis *(p.77)*
Respiratory alkalosis can be acute or chronic and is caused by: rapid shallow breathing, which **depletes the carbon dioxide in the blood** due to: fear, stress, hysteria, meningitis, increased coffee intake, aspirin, high altitude, fever, pregnancy, elevated levels of ammonia in the blood, a hearty dinner, etc. Chronic alkalosis is accompanied by increased oxidative stress and **intense absorption of phosphates into cells, decreased levels of calcium in the blood**. This leads to calcification of tissues and bones, impaired thyroid function, kidney damage, atherosclerosis. *(p.27,35,39,51,76,77,98,102,112,150,152)*	**Respiratory acidosis** is characterized by increased levels of carbon dioxide in the blood due to **insufficient oxygen uptake** through the lungs. This condition is often caused by lung diseases and infections, chronic bronchitis, asthma, acute pneumonia, sedatives and antidepressants. *(p. 33,36,54,74,121,127)* Respiratory acidosis can also occur as a compensatory process for metabolic alkalosis. *(p.29,36,60,74,77,91,92,135,160,162)*
Symptoms of chronic alkalosis	**Symptoms of chronic acidosis**
Despite the potentially serious consequences of chronic alkalosis, **the symptoms are more difficult to distinguish** than those of acidosis. The most noticeable signs of chronic alkalosis due to **bicarbonate retention** are: • dehydrated, irritated skin, wrinkles, • cramps and muscle cramps, • pain in the pelvis and lower back, • constipation or insufficient bowel movements, • high blood pressure. **Alkalosis is directly related to diet and habits,** and can hardly occur in the body's natural regulatory metabolism, unlike acidosis. *(p.57-59,79,86,102,160)*	• **Painful symptoms:** headache, chest pain, abdominal pain, joint and bone pain, spikes; • **Physical disorders:** impaired vision, weight gain, weight loss, muscle weakness, pale and gray skin tone, oily skin and hair, clogged pores, pimples, brittle nails; • **Psychosomatic:** confusion, fatigue, tremor, insomnia, nausea, constant hunger. Ethylene glycol or methanol poisoning can also cause metabolic acidosis, with symptoms of shortness of breath and nausea. *(p.15,34,47-48,54,79,123,112,149,151)*

Regulation of alkalosis	Regulation of acidosis
• increased water intake - 10 glasses a day • regulation of breathing - deep and slow **abdominal breathing with air retention** and slow exhalation *(p.186)* • regular bowel movements *(p.143,144)* • regulation of the menu with more plant foods, reduced intake of fresh milk, fatty cheeses and meats, without antacids! *(str.166-169)* • correction of dietary errors *(p.143,165)* • avoid diuretic therapies with sodium chloride, baking soda, coffee, etc. • avoidance of frequent crying, situations of sudden stress and fear, frequent hysteria; • Avoiding frequent vomiting and profuse sweating without sufficient intake of fluids rich in electrolytes (water with salt, sugar and / or lemon, rice water) *(p.99,115)* • regular light anaerobic exercises (callanetics, underwater gymnastics, muscle stretching, joint movement). *(p.186)*	• increased intake of pure mineral water and lemon juice - 8 glasses a day; (s.106,166) • regulation of breathing - deep and slow **inhalations without air retention** and forced exhalation, with the help of the diaphragm,; *(p.1,187)* • avoiding urine retention; *(p.15,102)* • adjusting the menu with sufficient intake of alkalizing vegetables, limited intake and if necessary complete exclusion of the consumption of meat and sugars; *(s.78,168)* • avoiding the sedentary lifestyle; • avoid irregular intense physical activity. *(p.61)* • avoiding situations with prolonged mental stress; (p.27,35,47,49,148) • taking measures to reduce antidepressants and painkillers; *(p.33,54,126,129)* • regular light aerobic exercise and outdoor walks. *(p.182,186)*

The appetites for food, addictions and emotions that feed our ambitions, disappointments, fears, spiritual and material aspirations can lead us into the unwanted cycle of impaired metabolism, and even unlock the destructive energy that causes toxemia in our body. *(p. 44,48,55,57-58,93,159)*

Our Stomach, in which these reactions take place primarily, is the first to signal when we are standing infront of the door of "imbalance". *(p. 79,82,86,90,125,157,171,175,179)*

The gastric flora is extremely sensitive to:

• strong acids and strong bases *(p.71-79,127)*

• **rancid fats**, forming highly reactive peroxides, but also spicy foods that block bile secretion, *(p.61,64-65,111)*

• **negative emotions** potentiate completely untimely effusion, stagnation, high acidity or toxicity of bile *(p.12,27,33,112)*

• **joy and contentment** - activate the receptors for serotonin, which is secreted in the gastrointestinal tract to regulate hunger. ***When we rejoice, hunger is satisfied!*** *(p.33,34,90,126,158,159)*

• **Renal weakness** potentiates dehydration and depletes hydrochloric acid, important for antibiotic protection of the gastric flora, for good digestion, and especially for natural bicarbonate secretion after a meal, maintaining a normal pH balance in the digestive tract and blood. *(p.95,125,132)*

• **Poor oral hygiene** and disturbed pH balance in the oral cavity - reduces salivary secretion containing the enzyme amylase - important for the digestion of carbohydrates, increases hunger and stimulates the outflow of stomach acid between meals - a prerequisite for peptic ulcer. *(p.76,78,112,127,165)*

• **impaired absorption and excretory function of the colon** due to impaired secretion of bile and pancreatic juices. *(p.51,63,73,76,82,109,122,139,143)*

The Stomach, like the Soul, is like the little children - they enjoy everything and readily endure everything. When we systematically import into our stomach foods and elements that are not beneficial to our body, then the bile and pancreas flood the stomach with their dissatisfaction and corrosive acids and bases. In the same way, if in life we are systematically subjected to circumstances, feelings and thoughts that are not favorable for the development of our Soul and systematically arouse destructive emotions, then our stomach gets sick first.

If we overcome the "hunger of the eyes", which constantly feeds the ambitions of the Ego, **then the Light will be able to freely penetrate and feed the body and Mind.** *(p.18,25,42,111,131,174)*

If we strive to feed only the hunger for gain, and this pursuit eats away at our stomach, heart and life, we will never be able to see beyond this reality, **we will remain locked in the dark labyrinth** of the Minotaur *(p. 37-38)*, without understanding ourselves, the world, the essence of matter and the meaning of life. *(p.22,26,29,47,51,54,59,88,158-170)*