

## Chapter 6: Impaired Metabolism

The secret trigger of almost all diseases.

*" The physical body is connected with all the matter ... - through the body we enter the visible Nature in order to use it. No one should come into conflict with his body, whatever it is.", Peter Deunov*

Metabolism is a vital exchange, synthesis and transformation of nutrients, information and energy, through which life flows and takes place in matter and in our bodies. This exchange of life manages and maintains almost all physiological functions and processes: digestion, respiration, excretion, detoxification, growth, circulation, movement, regeneration, reproduction, interaction with the environment, etc., through bio-transformation, energy synthesis, transport and cell exchange. (p.13-17,42)

In short, **the metabolism in our bodies converts food into energy.** (p.18,42,96)

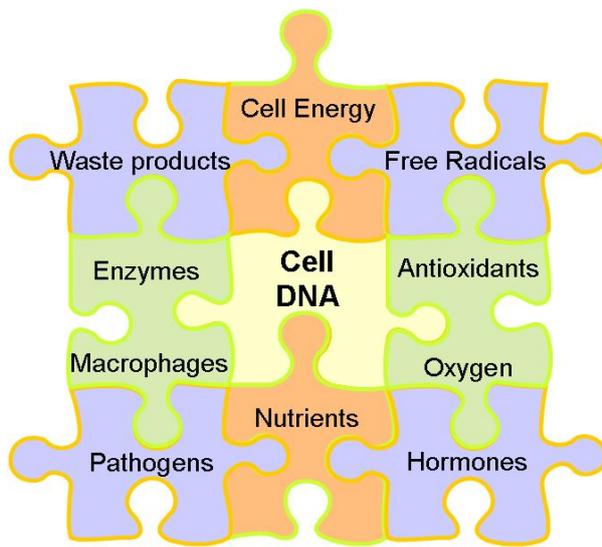
Quality of life, health and metabolism depend on the qualitative exchange of substances and energy between the cells of our body. The nutrients and biomolecules involved in cellular metabolism perform various functions and applications:

- **nutritious elements:** provide the necessary energy for vital functions, mainly supplied by carbohydrates (sugars) and lipids (fats); (p.121,131,158,166,168)

- **functional:** performing an important transport-communicating role in cellular metabolism and participating in the realization of life processes (proteins: transport, muscle, immune, etc.; including enzymes: controlling metabolism and synthesizing various necessary metabolites; coenzymes; minerals: electrolytes, vitamins and antioxidants, hormones: signaling biomolecules); (p.34,39,52,62,73,83,85,90,92,104,110,115,135,168)

- **structural elements** - the main building blocks of which the body is composed: water - about 60%; proteins - about 15%; lipids (fats) - about 12%; mineral salts - about 4%; carbohydrates - about 1%; nucleic acids (DNA and RNA) - about 0.14%; (p.22,51,95,169)

• **waste products** (unnecessary metabolites, free radicals, xenobiotics – foreign /poisonous / toxic substances), which play an important role in cleansing the cells and the whole organism. (p.52-54,61,111,127,143)



**Fig.6: Main participants in cellular metabolism**  
In practice, the "Metabolic Puzzle" consists of a series of complex tasks and processes that each cell in the body has to solve and manage, at every single moment of the day, **following the precise instructions set in its DNA.** Each cell has the property not only to self-control, but also to support the functions of neighboring and other cells, according to its specifics and role. Metabolism and life processes in the human body, by nature, are designed to be managed in perfect sequence, naturally and unhindered. These

properties are embedded in our genes. (p.15,22,29,85)

**Metabolism**, i.e. the cellular exchange, also **maintains the vital balance in the body**, under the external influence of various environmental factors: the change of day and night, seasonal climate change, cold, heat, ultraviolet radiation, physical and mental stress during daily activities and so on (p.21,25,32,39,64-65,86,94)

### The energy that drives metabolic processes

Metabolism, which practically sustains life in our body, is carried out through two main, opposite, but mutually supportive processes: (p.20,22,29, 60,70)

• **Catabolic processes**, which supply the necessary energy for cellular metabolism - produce ATP (Adenosine-Tri-Phosphate) - the so-called. "Cellular energy currency" and the vital glucose, for which purpose they **break down the main nutrients by oxidation, with the help of inhaled oxygen.** Catabolic processes also support the work of the nervous system and muscles. Catabolic processes correspond to the force of action of Yang energy in our body. (p.20,24,35,42,51,102,108,125,132,139)

• **Anabolic processes** are necessary for vital body functions such as growth, regeneration, maintenance of tissues and muscle mass, genetic synthesis of nucleic acids and proteins, but also for the storage of energy reserves in the form of fat. Anabolic processes **consume a large amount of energy**, delivered through catabolic processes, but also **release a large amount of hydrogen**, which later serves for resynthesis of the "cellular energy currency". Anabolic processes maintain the strength of the potential Yin energy in the body. (p.29,31,35,40,42,45,95,106,121,135,169)

The energy provided by the interaction of inhaled oxygen with the hydrogen released by the cells is the main engine of metabolism. As mentioned, such an "interaction" in external or laboratory conditions can cause an explosion of a large scale. In our body, this cannot happen due to the complex conversion of this process, which actually oxidizes **hydrogen** from nutrients to water and releases excess **carbon dioxide**. A major role in this regard is played by the synthesized "cellular energy currency", which, in addition to being vital for cellular exchange, also plays the role of a **kind of buffer, engaging the explosive energy of hydrogen for beneficial purposes, including elimination of toxic metabolites, such as ammonium**. In contrast to carbohydrates and other nutrients, which if are in excess have the property of being stored in the form of glucose and fats for further energy needs, the "cellular energy currency" - **ATP, can not be stored**. It can only be used to exercise cell activity and in case of excess is released as heat, which is also needed for our body, as well as for the ongoing metabolic reactions. (p. 20,21,29,31,33,39,40,42,71,73-74,76,78,129,132,162)

It is here that we can find the reason why we often say that "**the atmosphere is hot or explosive**" when we are in a situation of strained relationships, or within the surrounding of an angry person.

For example, cortisol, which we called "stress hormone" and can also manifest as "**anger hormone**", is responsible for intense catabolic processes, ie. for the breakdown of stored fat and glucose under stress. For this purpose, cortisol does not always require the intervention of oxygen, which in turn **potentiates the acidification of body fluids due to the generated excess of hydrogen molecules**. Not coincidentally, as a result of overeating, after a late dinner or alcohol intake, but also after sleepless night, we become angry. Such situations, in turn, catalyze the anabolic processes in our body, which also release excess hydrogen molecules in our blood and increase the heat in our body. **This leads to stagnation of excess Yang energy in our Liver** and slows down the metabolic and detoxifying processes controlled by this organ. **Due to the generated excess heat and unused energy, we become nervous, restless, irritable and angry, thus activating cortisol**. This hormone can help us restore balance in a short time, but it can also quickly push us to the next unreasonable step, such as eating something sweet at the most inappropriate and unhealthy moment for our body.

It is clear that saving and accumulating energy, but also its excessive waste, not only **slow down the metabolism**, but also potentiate our **inflammable emotions**. (p.12,25,27,33-35,39,47-48,54-55,58,71,79,90)

## Metabolic rate

The metabolism of proteins, sugars and fats is determined by the specific chemical processes of protein, carbohydrate and lipid metabolism. The rate of ongoing biochemical reactions in cells can define the metabolism as accelerated, normal or slow, depending on the amount of energy consumed, calculated in calories.

For example, intense exercise can speed up metabolism, increasing the blood flow, and stimulating the **catabolic processes for the supply cellular energy**. But similar to overeating, it can also slow down the metabolism for a while (2-7 days) by potentiating the **anabolic resynthesis for muscle regeneration** and by burdening the cells with **neutralizing the waste metabolites** (such as ammonia and lactic acid) from intensive muscle work. In this regard, regular, but not strenuous, exercise can be extremely helpful in maintaining a good metabolism. Over time, cellular metabolism can be affected by external influences, or by an unbalanced systemic change in lifestyle. **This can slow down cell cleansing, and hence the body's natural detoxification**. Such processes can be caused by genes, heredity, aging, deterioration in immunity, but also by impaired hormonal effects. A metabolic dysfunction (**delayed metabolism**) at the cellular level can often be perceived as a signal for a mental, physical or emotional malaise and, in the case of systemic manifestations, lead to a more noticeable health disorder or disease. (p.27,33,39,47-48,49,52,57-58,60,61,66,78,85,143,165)

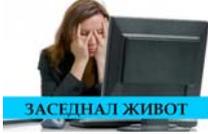
**A good metabolism is a balance** between food and fluids intake, nutrients produced and absorbed, energy produced and used, and waste products released - unnecessary fluids and metabolites. The excretory system is controlled by the liver, kidneys, spleen and lungs, with a particularly important role played by the thyroid gland, lymphatic system, sweat glands, bladder and colon.

**When the spleen stimulates excretion, the liver is ready to uptake, transform and supply nutrients and energy.** (p.25,121-123,131,163)

**And when the colon is emptied, the mind clears and the lungs begin to efficiently supply the cells with oxygen.** (p.139-144,162)

**Physical and mental conditions** such as lymph stagnation, cellulite, weight gain, emotional, digestive and hormonal disorders are signals of a metabolic disorder. **Metabolic impairment** can have various causes: sedentary lifestyle, excessive exercise, poor diet, excessive consumption of alcohol and medication, overeating, inadequate water intake, stress, and even emotional imbalance and depression. An impairment of the metabolism can be due to an **energy imbalance** in some organs or organ systems: blood flow, cardiovascular activity, endocrine glands, energy stagnation in the liver and spleen, digestive disorders, kidney function. **The most common symptoms of a metabolic disorder** can be: flatulence, swelling in the limbs, tiredness and exhaustion, lack of tone and mood, chronic headache, gastrointestinal disorders, constipation. All of these unpleasant conditions and symptoms "speak" of **toxicity in the body**, which depletes minerals, vitamins and antioxidants in the blood and significantly reduces the natural functions of the cells for nutrition and self-cleaning. **Metabolic syndrome**, which potentiates persistent hunger, for example, is a condition of **acute cellular malnutrition due to chronic genotoxic stress..** (p.35,47,49,51,55,63,88,127)

**Table 9: Under what circumstances can the various states of impaired metabolism occur and how to overcome them?**

	 STRESS	 OUT OF REGIME	 OVEREATING	 ЗАСЕДНАЛ ЖИВОТ
<b>Indicators:</b>				
<b>Signals of impaired metabolism:</b>	<i>fatigue, nervousness, bad mood, headache, insomnia, weight gain, poor memory and concentration, indigestion</i>	<i>fatigue, impaired vision, stiffness, back pain, problem skin, cellulite</i>	<i>bloated abdomen, edema, constipation, varicose veins, high blood pressure, increased appetite, chronic fatigue</i>	<i>dry or oily skin, feeling hungry, hunger for sweets, lymphatic stagnation, varicose veins, constipation, hemorrhoids</i>
<b>Metabolite with impaired / stimulated metabolism:</b>	<b>Bone metabolism:</b> cortisol, ammonia, aldehydes	<b>Lipid metabolism:</b> (triglycerides, phospholipids, sterols, bile acids)	<b>Carbohydrate metabolism:</b> purines, fructose, carbohydrates, lactic acid	<b>Protein synthesis:</b> oxygen, hydrogen, carbon, water, thyroid hormones
<b>Biomarkers:</b>	blood sugar, calcium, pancreatic enzymes, thyroid hormones	cholesterol, triglycerides, liver enzymes	uric acid, glycated proteins, insulin	leukocytes, platelets, hemoglobin, pH
<b>Risk factors:</b>	<i>sedentary lifestyle, excessive alcohol consumption, systemic overeating in the evening, taking corticosteroids and nonsteroidal anti-inflammatory drugs, sweets with coffee</i>	<i>late bed - after 23.00, late evenings - after 20.00, late waking - after 9.00, stress, excessive sugar intake, sedentary lifestyle, statin intake, diabetes</i>	<i>sedentary lifestyle, excessive consumption of meat, delicacies and seafood, sweetened beverages, pasta and sweets, intake of sweet fruits after dinner</i>	<i>fasting, overeating, irregular lifestyle, stress, alcohol, insufficient water intake, lack of oxygen and exercise, chronic disease</i>
<b>Impaired energy flow:</b>	<b>Exhaustion of essential energy Heart-Kidney</b>	<b>Yang stagnation Energy: Liver - Spleen</b>	<b>Stagnation of Yin Energy: Spleen - Heart</b>	<b>Yin energy Exhaustion : Lung - Kidneys</b>
<i>risk of developing a disease</i>	<i>hormonal imbalance, infertility, neuropsychiatric disorder, cardiovascular diseases, gastrointestinal disorders, pancreatitis, osteoporosis autoimmune diseases: arthritis, psoriasis, cancer</i>	<i>Bile stasis, spikes, hepatic steatosis, high blood pressure, atherosclerosis, varicose veins, hemorrhoids</i>	<i>gastrointestinal disorders, obesity, gout, insulin resistance, metabolic syndrome, diabetes, cardiovascular disease</i>	<i>impairment of renal function, obesity or weight loss, muscular dystrophy, pulmonary complaints, decreased immunity, anemia</i>
<b>Prevention:</b>	<b>Stress management and emotional control</b>	<b>Building a regime</b>	<b>Appetite regulation</b>	<b>Movement and breathing</b>
<i>How do we understand the concept of "prevention" and what are the consequences of the ways in which we apply it? Pages 7-9, 50-51, 79, 87</i>	<ul style="list-style-type: none"> <li>➤ Active rest after periods of prolonged stress, relaxation,</li> <li>➤ music, massage, dancing, swimming;</li> <li>➤ an appropriate diet with imports of vitamins, minerals and antioxidants from fresh plants,</li> <li>➤ self-control and acquisition of skills for control of emotions and stress;</li> <li>➤ positive setting,</li> <li>➤ avoid irritants.</li> </ul>	<ul style="list-style-type: none"> <li>➤ normalization of the daily diet, work and rest,</li> <li>➤ balanced menu,</li> <li>➤ diet for detoxification and strengthening of the liver and cleansing of the gallbladder,</li> <li>➤ regular light sports classes.</li> </ul>	<ul style="list-style-type: none"> <li>➤ reduce carbohydrate intake: sweets, pasta, bread,</li> <li>➤ reduction of meat intake, and especially of delicacies: salami, pate, trifles, bacon, exclusion of "snacks" between main meals,</li> <li>➤ turn off late dinner.</li> <li>➤ regular light physical exercises for energy balance and regulation of bowel movements.</li> <li>➤ regular exercises to improve blood circulation and muscle tone.</li> </ul>	<ul style="list-style-type: none"> <li>➤ breathing exercises in fresh air to improve the pH in the lungs and body fluids,</li> <li>➤ balanced diet with sufficient intake of vegetables and fruits,</li> <li>➤ water intake every 30 minutes in 50-100 ml</li> </ul>
	Page 95-99	Page 105-106	Page 123,125-130	Page 135-137

When we talk about metabolism, we often refer to our physical condition, without realizing that the metabolism in our body takes place simultaneously on a physical, mental and spiritual level. For example, the metabolic stagnation in our body indicates impaired energy exchange in the energy meridians and their governing Yin and Yang organs, or even activated destructive energy. Metabolic imbalance usually occurs when energy blockage occurs in the Yang organs. TCM takes as a basis of all diseases the "pentagram" of the destructive energy exchange in the five major Yin-organs of our body. (Table 2, p. 20) If we look closely at the pentagram of destructive energy in Fig. 3 p. 20 and Fig. 7 below, it will become clear that it is most often activated by stagnation in the Colon. When the Yang energy of the colon is stagnant, toxic bile begins to circulate in the body (p.104,108-112,140-144), causing stagnation of Yang energy in the reservoir of Yin energy - the liver. In Table 2 on page 20, this destructive process is symbolized by "the property of the element *Metal* (colon) to cut *the Tree* (liver)". Stagnation of bile acids in the colon has the potential not only to change the circadian rhythm and chemical composition of essential bile juices produced in the liver, but also those secreted by the gallbladder in the stomach after eating, and secondary bile acids synthesized by the intestine flora. This is one of the reasons for the increased acidity of the circulating fluids in the meridian of the bladder, which in turn potentiates the depletion of vital minerals, vitamins and trace elements in the small intestine and disrupts the epithelial layer and cell walls of blood vessels (*varicose veins, hemorrhoids, etc.*) .When the vital elements in our body are primarily involved in maintaining the alkaline-acid balance and neutralizing free radicals, the balance in the intestinal flora is disturbed, and hence the indigestion and malnutrition of cells and organs, excessive production of lactic acid and putrefaction of food in the colon, storage of fat in the abdomen, thighs and lymph, increased toxemia (contamination) and weakened immunity. (p.49,51,52,55,61,79,86) Today, more and more scientific and medical researches find out that the main cause of metabolic syndrome, overweight, chronic and malignant diseases lies in the impaired metabolism of bile acids.

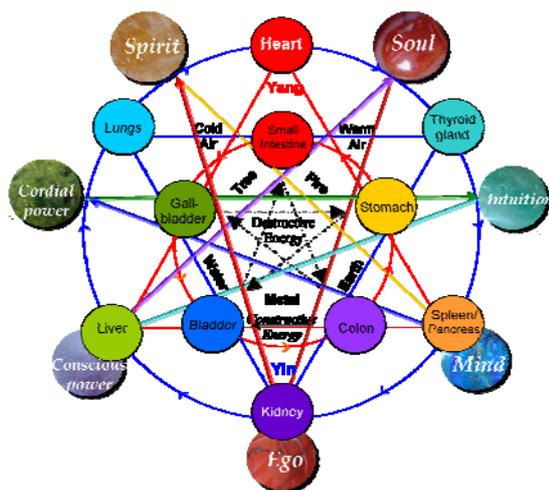


Fig.7: Energy regulators of metabolism

In some religions and socio-political organizations beliefs, the pentagram is considered as the most stable symbol of protection in the earthly existence of human being. This suggests that the "pentagram of destructive energy" once set in motion in our bodies can hardly be neutralized. (p.20,29,31,33,57)

If we look at metabolism in our mental level through the "heptagram of the Seven Forces", we will be able to find the effect of these relationships on our physical manifestation in the Yin-Yang hexagram, and to neutralize the "pentagram of destructive energy." (p.42,51,59,93,98,99)

Often the Ego seeks to reap the fruits of the Spirit by cutting down the Tree of our Soul's sacred desires, which according to TCM are stored and kept in the Liver.

If, instead to ignite passions, we melt the element of Metal in the Fire of Love, compassion will immerse us in the deeper Water of Consciousness, in which to cool the ambitions of the Ego - the only culprit for the diseases and sufferings in our earthly existence. (p.104,111,117,133,137)

*The good metabolism needs purity of mind and body, cordiality and cheerful mood, oxygen, rest and movement, some fresh food and fresh water.*