

The gallbladder is "our inner hidden camera that sees everything," and from which we can hide nothing. The gallbladder plays the role of a "warner" that sends us signals in a timely manner, especially when we disturb our inner harmony and balance.

The gallbladder signaling system works flawlessly:

• sends us headaches when we are angry or when our head is full of conflicting and confused thoughts, (p.12,36,148)

• stiffens the back and tendons when we hold back negative emotions, become overtired, or neglect our or someone else's will and spiritual aspirations; (*p.152,184,190*)

• blurs our eyes when we sink into delusions and feed unhealthy illusions; (*p*.27,117,158-159,163)

• causes heartburn and reflux when we are sour and lazy; (p.17,34,35,43,70,112,127)

• causes bloating, swelling and anger when we overdo it with our affluences and appetites. (*p*.45,47,57-58,131,149)

The meridian of the gallbladder is the carrier of the Yang energy of the Liver. (*p.104*) It starts from the outer edge of the eye, descends to the opening of the ear, passes up along the temples at the base of the scalp, goes around behind the ear to the base of the nape, then, like the curves of a "labyrinth" (*p.37-38*), returns back to the forehead to the middle of the eyebrow, from where it descends back to the nape, neck and shoulders, passes through the ribs of the chest, (*p.114*) descends through the abdomen (*p.125*) to the hip joint, where it meets the meridian of the bladder, (*p.101*) passes along the side of the thigh and lower leg, and ends at the base of the nail of the fourth toe. (*p.131*)

The main function of the gallbladder is not only to support digestion, but mainly to support the metabolic and detoxification work of the liver by regulating the production, secretion and circulation of bile acids in the entero-hepatic cycle and throughout the body. (*p*.52,53,127) It is in this way that the bile sends us its signaling warnings. (*p*.175-176,184,190) Therefore, we will take a closer look at the metabolism and function of bile acids.

BILE ACIDS AS REGULATORS OF THE BIOLOGICAL CLOCK

The metabolism of bile acids is one of the main "engines" of the functions of our body, along with respiration and heart activity.

Bile acids are produced in the liver, which is the "chemical laboratory" of our body. (*p.* 32) Almost every minute the liver takes care of the metabolism of nutrients - their absorption, their conversion into blood, body fluids, hormonal, immune, detoxifying and energetic substances. (*p.*43,104,131) The liver synthesizes essential bile acids from cholesterol, which are stored in the gallbladder, from where they are secreted for digestive, metabolic and detoxification needs. The gallbladder also synthesizes specific bile acids to break down fats and fat-soluble vitamins, and aids in their further absorption in the gastrointestinal tract. Often in this process, called the entero-hepatic cycle, bile acids are administered several times a day. (*p.*25,105)



What is the importance of bile acids (bile) for our health, balance, tone and energy?

• **Bile acids are physiological "detergents"** that break down dietary fats, emulsify fat-soluble vitamins (A, D, E, K), and facilitate intestinal absorption of lipids, nutrients and vitamins. (*p*.63,82,169)

• Synthesized by cholesterol, bile acids have metabolic properties similar to steroid hormones. They regulate the activity of some enzymes from the detoxification system, electrolyte ion channels, cellular energy metabolism and the synthesis of various substances involved in lipid metabolism. They emulsify dietary fats and facilitate their absorption in the intestine. (*p.39,43,60,61,82,115,158,169*)

• **Regulate the distribution of fat in the body.** The enterohepatic movement of bile acids has an important physiological effect, not only in the reversal of the synthesis of bile juices, but also in the control of lipid homeostasis throughout the body. (*p.*29,47-48,122)

• Participate in the production of cholesterol, DNA synthesis and hormones. (*p.85*)

• Control the motility of bacteria in the intestinal flora, eliminate bacterial infections in the intestines and bile ducts. They regulate the electrolyte balance, produce salts and alkalizing agents, maintain the alkaline-acid balance in the gastrointestinal tract and blood. They excrete immunoglobulin A (IgA) and inflammatory cytokines, stimulate the innate immune system in the intestine. (*p.51,70,81,82,127*)

• Bile acids act as regulatory molecules and hormones affecting adipose tissue distribution, insulin receptor sensitivity and triglyceride metabolism. (p.47,190)

• They act as steroid hormones secreted by the liver and are active participants in the hormonal, neurotransmitter and signaling systems in the body. Bile acids also act as signaling molecules, activating inflammatory agents, fast nuclear receptors and cellular signaling pathways. They regulate the signaling of various hormonal, immune and neurotransmitter receptors, which play an important role in hormonal balance and the immune system. (*p.60-63,66,89,90,104,112*)

• Participate in the synthesis of detoxification enzymes and help eliminate and excrete toxic metabolites: endobiotics - waste products of metabolism, hormonal metabolites and energy substances, pathogens and xenobiotics - toxic substances from the air and food, medicinal metabolites from end metabolites. Actively involved in the natural process of detoxification of the body. (*p.44,52,54,59*)

• Bile acids eliminate potentially harmful endogenous and external lipophilic substances and substrates, remove excess cholesterol in the blood and some catabolites, including bilirubin, from the antioxidant breakdown of hemoglobin. (*p*.43,92,111,121,136)

• As regulators of electrolyte balance, actively involved in bone metabolism. (*p*.51,71,77,79,84,79,95,103,129)

PROTECTIVE FUNCTION AND TOXICITY OF BILE FLOW:

Bile is a complex water secretion that originates from hepatocytes and is processed and secreted by cholangocytes - the cells of the gallbladder. It consists of ~ 95% water in which several endogenous solids are dissolved, including bile salts, cholesterol, phospholipids, bilirubin, steroids, enzymes, amino acids, porphyrins, trace elements and minerals, vitamins, as well as exogenous substances and xenobiotics coming with air, food, water, etc. Bile flow is the main excretory route for waste metabolites of these solid lipophilic substances, whose molecular weight> 300-500 daltons does not allow their filtration and excretion by the kidneys. (p.25,52-54,95,109)

Causes, which block the natural bicarbonate protection of the liver and gallbladder, and potentiate the retention of toxic bile: (p.54,73,79,127,129)

• Disturbed balance: potentiates the formation of bilirubin and cholesterol stones, stimulates cortisol, disrupts bile circulation. (p.25,33,45,57)

• Lack of mode and Light: depletes melatonin, important for good sleep, for the synthesis of vitamin D in the skin and for the breaking down and conjugating bilirubin, using glucuronic acid. Ionizing radiation potentiates hemolysis, hence unconjugated bilirubin, respectively bile stones. (p.25,39,62,64-65,82,104-105,112)

• Dietary errors blocking the enzyme that eliminates toxic bile: intake of: antacids, drugs and some herbs; hot, spicy, fatty and salty foods; sweet desserts immediately after eating or with coffee increase insulin secretion, which blocks the bile flow in gallbladder and bile ducts. (s.54,79,109,127-128,143,165,190)

• Toxic bile causes: genetic changes, metabolic and autoimmune diseases, diabetes, overweight, hormonal and nervous disorders, constipation, hemorrhoids, **cancer.** (*p*.41,49,57-58,59,61,66,83,85,92,112,131-132,149,162,190)

THE ASTROLOGICAL "FRUIT OF THE SPIRIT"

The bile, as the "All-Seeing Eye", always knows what we need, following and supplying strength to our life aspirations. The fruit of our "Tree of Life" ennobles the Primordial Life Force, through the energy elements of the Tree (yang) and Fire (yang), under the astrological influence of the zodiac sign Aries. (p. 94,157) The astrological task of Aries is to realize the stability, immutability and "fruitfulness" of the Spirit in the material world. The strong material vibration of Aries often forces him to submit the spiritual aspirations to selfish passions, hunger and ambition, loosing his chance to cultivate the abundant "Fruit of the Spirit", whose seeds are embedded in the Ego itself.

THE BINDING IRON POWER OF THE PRIMARY FORCE

The clash between the forces of the Ego and the Spirit gives rise to the burning fire of the primary Love, which obscures the Vision of Reality. This primordial Fire is often kindled from the compassionate spark of possessing motherly Love to the soul-burning envy, jealousy, and hatred. Regardless of the struggles for supremacy that our Ego leads, in the end, in this primordial Fire is forged the iron with which we "reap the fruits or cut down the tree," or nail our Consciousness into the "rock of stupidity and suffering." (str.15,57-58,63,86,92,102,104,112,113,114,133,146,152,173,190,195,197)

BILE SECRETION AND QUALITY OF THE IMMUNITY (p.80,91)

Traditional Chinese medicine associates excessive emotionality, euphoria, agitation, manifestations of anger, rage, dissatisfaction, with various health conditions of the liver and bile. (*p.* 12,21,27,33) Also, the ancient Chinese believed that the liver was a "guardian of the Spirit", symbolically depicting it as a tree. **The beautiful fruits of our Spirit** are ours: will, harmony, life force, and persistency in the personal virtues: cordiality, self-confidence, benevolence, generosity, zeal, etc. (*p.* 21) **The physical expression of the fruits of our Spirit is concentrated in our gallbladder.** (*p.51,59,63,131*) It is a kind of regulator of the supply and distribution of the necessary valuable substances, but also of the vital energy. And indeed, no matter how unbelievable, **our bile controls even our appetite and emotions**. Often, when we are "sour", we eat more. And when the toxicity in the body is increased, we lose appetite, which doctors associate with malaise in the liver. Bitterness in the mouth, for example, is a signal of bile duct obstruction. When our tone is good, no matter how much we eat, we still have a good metabolism. (*S.25,29,34,42,68,131,132,157,164,166*)

Modern medicine has developed on the basis of the theory of the "**four moods**", which appeared in the ancient Greek era, and then in ancient Roman, Islamic and Ayurvedic medical practices. The founder of this medicine is considered to be Hippocrates, according to whom there are four main temperaments: choleric, melancholic, phlegmatic and sanguistic. (*p. 148*) **Hippocrates discovered the close connection between mood and the type of body fluids, on the basis of which he determined the type of immunity**: black bile, yellow bile, phlegm and blood. Whether the blood is "blue" or "red", for example, depends on the content of erythrocytes, hemoglobin, oxygen and carbon dioxide. (*S.31,74,81,92,121,127,158*)

Our emotionality is an indicator of whether we know how to store and use our goods wisely. In the conditions of spontaneous and unbridled emotions, simultaneously with the activated "naughty emotional hormones", our body experiences **an acute hunger for energy**. In such cases, untimely and without a vital reason, such as digestion, for example, the gallbladder secretes bile to support the timely supply of energy. Prolonged retention of negativity can cause gradual "rot of our fruit" and even "drying of our tree." (*S.12,25,, 33-36,57-58,91,133,152,159,173,183,190*)

The importance of bile secretion for the health of the body becomes most clear when it is impaired by the development of genetic or acquired cholestatic diseases. This is most drastically demonstrated in children born with **biliary atresia** who develop progressive cholestatic liver damage, biliary cirrhosis, and ultimately liver failure and death. That's why:

Benevolence, patience, inner harmony and comfort, but also pure Consciousness, creative and bright Thought, the fruitful Spirit and pure-hearted Love, during pregnancy, are extremely important for the quality and well-being of the New Life! (S.10,91,92,99,106,111,133,144,191,195)