

## The main medical indications of natural bile acids in professional literature:

1. Reducing / eliminating complaints related to bile production or biliar tract passage disturbances:
  - 1.1. enhancing bile discharge, supporting bile flow
  - 1.2. reducing the risk of bile stone formation
  - 1.3. reducing / eliminating symptoms due to the functional disorders of the biliar tract passage following cholecystectomy
2. Reducing / eliminating gastroenterological disorders especially (stomach) overload
3. Eliminating defecation disorders (irregular defecation or hard fecal matter), defecation control
4. Postively influencing the disorders of the enterohepatic circulation
5. Reducing colitis
6. Positively influencing a great number of diseases related to endotoxins, lipopolysaccharides and cytokines produced by these that cause the most various types of inflammations in almost any organs of the human body. Bile acids are the most important tools in neutralizing endotoxins.
7. Alleviation of the negative effects of psoriasis.
8. Cholic acid, as part of the main component of bile acids, appears forming a compound (conjugating) with **TAURIN**. It is the so called **taurocholic acid that can be found in the bile of a great number of animals, especially in bovines (oxen)**, which supports the body in the following ways:
  - 8.1. Taurin represents 50% of the free amino acids present in the heart and it is proven that taurin has a positive effect on cardiac muscles. When the heart is unable to pump blood into the body effectively enough, taurin will support cardial contraction so that the heart can pump blood more intensively and it reduces blood pressure. According to the latest research, the consumption of products containing taurin (e.g. containing bile acids) may have a promising effect on people suffering from heart failure.
  - 8.2. Taurin supports the stream of glucose into the cells thus increasing physical performance and reducing blood sugar level. As a cell volumizer and insuline mimetic, taurin is used for transporting key nutrients into muscle cells such as glucose and amino acids. By mimicking insulin taurin helps to transport amino acids and glucose into the muscle cells and thus has an important role in cell volumization. This means that the cell gets into a „super hydrated” state, which – according to researchers – results in faster protein synthesis and reduced protein degradation. This, at the same time, leads to increase in strength and muscle mass. Research has also shown that the consumption of products containing taurin (e.g. containing bile acids) reduces the level of ethyl-histadine (3-MH). This also hows that taurin helps to reduce the degradation of the body’s protein reserve.
  - 8.3. Prolonged muscle load reduces taurin and amino acid content in the muscles. After a while the transport of glucose and calcium is arrested and a spasm may develop in the muscles. It can be alleviated by products containing taurin such as bile acids.
  - 8.4. Taurin helps generate brain impulses by enhancing the flow of calcium, sodium and magnesium out of an into cells. Thus it plays a key role in nerve functions and in blood pressure control. Furthermore, it is an inhibitory neurotransmitter (tranquilizing chemical signal) and can also have a cell membrane stabilizing role. This means it tranquilizes the brain and the nervous system and helps overcome anxiety, epilepsy and other brain related disorders. It is also considered a mild sedative.
  - 8.5. Taurin stabilizes the cell membranes and helps maintain intracellular calcium balance and calcium level, it regulates calcium level. The proper amount of taurin reduces the chance of cardiac calcification. Cardiac muscles suffer the most from a low taurin level.
  - 8.6. Taurin is essential for the optimal development of the nervous system.
  - 8.7. Administering products containing taurin is useful in diebetes, in treatment of stress and in reducing the effects of increased intellectual and physical load.

- 8.8. Taurin is an important tool in fat burning: one of the positive effects of taurin is its ability to dispatch fat burning hormones such as growth hormone. Besides, taurin partakes in the metabolism of bile acids that play an important part in fat digestion. Taurin is essential for the proper digestion of fats, for the absorption of fat-soluble vitamins and cholesterol level control. Taurin deficiency is especially common in people with overweight.
- 8.9. Some researches have shown taurin to reduce the cholesterol level in the liver and to attenuate bile, thus preventing the formation of bile stones.
- 8.10. In summary, its partially known physiological effects:
  - 8.10.1. Takes part in different ways in the processes of maintaining health and performance
  - 8.10.2. Serves as an energy transmitter and detoxicant
  - 8.10.3. Stabilizes cell membranes
  - 8.10.4. Plays a role in the regulation of calcium flow
  - 8.10.5. Plays a role in the normal operation of certain tissues (e.g. cardiac muscle)
  - 8.10.6. Regulates the level of fluids in the muscle cells
  - 8.10.7. Similarly to insulin, it enhances the flow of glucose into cells
  - 8.10.8. Has a detoxicating, antioxidant and thus immune system strengthening effect
  - 8.10.9. Taurin positively influences and supports the following:
    - 8.10.9.1. metabolic processes
    - 8.10.9.2. adrenaline level
    - 8.10.9.3. digestion of fats, fat metabolism
    - 8.10.9.4. the immune system
    - 8.10.9.5. cholesterol level
    - 8.10.9.6. blood sugar level
    - 8.10.9.7. sperm production
    - 8.10.9.8. bile production
    - 8.10.9.9. blood pressure
  - 8.10.10. Taurin deficiency may have the following symptoms:
    - 8.10.10.1. retarded growth
    - 8.10.10.2. apathy
    - 8.10.10.3. oedema
    - 8.10.10.4. low body temperature
    - 8.10.10.5. hepatic disorders
    - 8.10.10.6. catabolism (muscle loss)
    - 8.10.10.7. exhaustion/faintness
    - 8.10.10.8. impairment of vision
    - 8.10.10.9. cardiac muscle damage
    - 8.10.10.10. abnormal development of the retina
9. Bile acids proved to have an inhibiting (fungistatic) effect upon the growth and reproduction of **Candida albicans**. It was established that bile acids and their simple derivatives show an anti-Candida activity and furthermore, bile acid has an inhibiting effect on Candida fungi species. The **Candida albicans** yeast fungus is the most common to the wide spread class of „Candida” diploid fungi. It can be found in the body under normal circumstances under the control of the intestinal bacterium flora. The useful intestinal bacterium flora (part of our immune system) controls the reproduction of fungi present in the intestines. But if it gets damaged or is destroyed, Candida yeast fungi in the intestine proliferates and invades the body (mouth, pharynx, mucous membrane of the genitals, intestinal tract and the blood circulation). The uncontrolled overgrowth of Candida fungi can cause several symptoms simultaneously or separately, often hidden behind the symptoms of other organic diseases. It is a disease with many faces that also aggravates the symptoms of other diseases. The main cause of the symptoms is of course the toxin produced by the fungi. Just a few symptoms of many (in systematic order):
  - 9.1. fatigue, sense of weariness
  - 9.2. exhaustion, lethargy

- 9.3. low spirits, unstanble mood, depression, panic disorder, fear of death, suicidal predisposition
- 9.4. forgetfulness, memory loss, dispersion, reduced concentration (also in youth)
- 9.5. inability to think (as if was not living on this Earth), lack of self control
- 9.6. uncertainty, hesitation, indecision
- 9.7. headache
- 9.8. irritability, explosiveness, intolerance
- 9.9. heartburn, abdominal timpany (unpleasant, painful), gas generation, stomachache
- 9.10. diarrhoea or constipation
- 9.11. nausea (possibly with trembling) when hungry
- 9.12. colitis
- 9.13. vaginal complaints: discharge, burning feeling, itching
- 9.14. frequet colds, cystitis
- 9.15. reduced libido
- 9.16. endometritis, reoccurring ovary cysts or oophoritis, salpingitis, infertility
- 9.17. menstrual disorders, premenstrual tension, PMS symptoms
- 9.18. refractory prostatitis in males
- 9.19. deterioration of sight: double vision, unclear vision, ettőslátás, homályos látás, sparkling látás etc.
- 9.20. muscle pains, cramps, stiffness of unknown or joint disorders
- 9.21. allergic reactions: food allergy, asthma, sensitivity to chemicals etc.
- 9.22. chronic elevation of temperature
- 9.23. skin symptoms:urticaria, itching skin areas, red skin, burning feeling on any parts of the body, eczema etc.
- 9.24. insomnia, sleep disorders, nightmares
- 9.25. hair loss, dandruff, greasy hair
- 9.26. loss of body weight or overweight
- 9.27. thyroid cysts, hyperthyroidism or hypothyroidism
- 9.28. in case of children: hyper activity, learning difficulties, frequent inflammations of nasal/sinus/pharynx section or the middle ear, itching skin, stomachache, hiperaktivitás, tanulási nehézségek, gyakori felső légúti és középfül gyulladások, bőrvizsketés, diarrhoea, anorexia etc.

***In case no organic reasons are established behind the above listed symptoms, it is time to think of systematic candidiasis, disturbed balance caused by the fungus *Candida albicans*.***