

Support for Healthy Gallbladder Function

Developed and reviewed by the clinical, chiropractic, and naturopathic members of the Standard Process team

Gallbladder Health and Function

The gallbladder's function is to store and release bile: a watery, alkaline fluid produced by the liver. It is essential for the digestion of fats and the absorption of fat-soluble vitamins A, D, E, and K.

The hormone cholecystokinin (CCK) is secreted in the upper small intestine in response to the ingestion of fat and protein during a meal. CCK signals the gallbladder to contract and release bile into the small intestine. Bile acids, which are synthesized from cholesterol in the liver and constitute about 1% of the total contents of bile, act as detergents to emulsify fats, aiding in their digestion and absorption. Bile acids also support the absorption of minerals, inhibit bacterial adhesion in the gut, and drive intestinal motility. They are converted to secondary bile acids by colonic bacteria, absorbed, and transported back to the liver to be reused and secreted into bile once again in a process called *enterohepatic circulation*.

Gallstones are a common problem that can develop when components in bile form hardened deposits. There are three main pathways in the formation of stones: cholesterol supersaturation of bile, excess bilirubin, and gallbladder hypomotility. Cholesterol gallstones are common in Western societies and are likely due to a combination of factors including metabolic dysfunction, lack of physical activity, poor-quality diets, and nutrient deficiencies.

Gallstones may get lodged in the gallbladder or the cystic or bile ducts. Obstruction can lead to inflammation, pain, and other symptoms. If the stone does not dislodge, more serious complications can follow, and gallbladder removal may be indicated.

Regardless of whether a patient has a gallbladder, lifestyle and nutritional interventions can support healthy bile composition and aid in the proper digestion and absorption of fats.

Supportive Lifestyle Practices

- Educate patients on the importance of good hydration. Bile consists of at least 95% water, and proper hydration is necessary for its synthesis.¹ Good hydration is dependent on a balance of water and electrolytes, particularly sodium and potassium.
- Recommend regular aerobic exercise, which has been shown to reduce the risk of gallstones and gallbladder disease.² Physical activity modulates gastrointestinal and gallbladder motility by affecting the release of CCK. It also improves metabolic parameters that can influence bile composition and gallbladder health.
- Consider acupuncture as a therapy to reduce cholecystitis-related symptoms such as abdominal pain and distension, nausea, and pain that radiates to the shoulder and back.³

Whole Foods Nutritional Recommendations

- Recommend regular consumption of artichoke, which has demonstrated bile-enhancing and hepatoprotective effects.⁴ Popular preparation methods include steaming, grilling, and roasting.
- Encourage patients to implement a high-fiber diet, which has been associated with reduced risk of gallstone disease.⁵ Fiber is thought to influence the production and reabsorption of secondary bile acids. Fruits, vegetables, whole grains like oats, and psyllium fiber are good sources of both soluble and insoluble fibers.
- Recommend that patients add beetroot to their diet. Constituents in beets can support improved bile flow, gallbladder wall thickness, and gallbladder motility.⁶

Dietary Supplement Regimen



A-F Betafood®

Suggested Use: **2 tablets per meal**

A-F Betafood is a gallbladder supplement that supports bile production and includes an array of whole food and other ingredients to support healthy fat digestion.*

- Supports healthy bile flow in the gallbladder*
- Supports bile production and helps maintain healthy liver function*
- Supports healthy lipid metabolism*
- Supports healthy bowel function*
- Contains a combination of key ingredients from Cataplex A, Cataplex F, and Betafood



Cholacol®

Suggested Use: **2 tablets per meal**

Cholacol contains desiccated bovine bile, a digestive component that may be involved in pathways that regulate normal gallbladder functions (such as gallbladder filling).*

- Ox bile has been historically used to support healthy fat digestion such as when eating a fatty meal.*
- Collinsonia root has been historically used to support normal elimination and digestive health.*



Choline

Suggested Use: **1 tablet per meal**

Choline is made with choline bitartrate and contains 180 mg of choline per serving.

- Supports healthy fat metabolism.*
- Supports healthy liver function*



Livton® Complex

Suggested Use: **1 tablet 3-4 times daily**

Livton® Complex is a liver tonic containing Globe Artichoke, Dandelion, Milk Thistle, Bupleurum and Fringe Tree.* These herbs have been traditionally used in herbal preparations to:

- Support healthy liver and gallbladder function*
- Encourage healthy digestive function*
- Encourage the healthy function of the organs of elimination such as liver and intestine*
- Relieve occasional mild digestive discomfort, including bloating and flatulence*

Assessment of Gallbladder Health

- Lab studies: complete blood count (CBC), comprehensive metabolic panel (CMP), liver function tests including bilirubin
- Palpation of the abdomen, Murphy's sign

In Office/Physical Exam

- Signs/Symptoms such as biliary colic, pain that radiates to the back, nausea, vomiting, bowel changes, difficulty digesting fats, jaundice
- Consider ultrasound imaging of the liver and gallbladder

REFERENCES

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4. Ben Salem, M., et al. (2015). Plant foods for human nutrition (Dordrecht, Netherlands), 70(4), 441–453.
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