

Liver-Toning Herbs for the Treatment of Liver & Gallbladder Disorders

The liver plays an important role in metabolic processes of the body. A poorly functioning liver can have a wide-ranging impact on health, causing or contributing to, for example, chronic skin disease, headaches, bowel disorders. Symptoms of poor liver function can include sluggish digestion, fat intolerance, nausea and chronic constipation. A treatment strategy could include use of herbs with choleric, hepatoprotective, liver-toning and depurative activity. (Choleric herbs improve bile production by the liver. Chologogue herbs improve gallbladder function (for example, stimulate release of bile that has already been formed in the biliary system).^{1,2}

Globe Artichoke

The leaf of *Cynara scolymus* is used in Europe as a traditional medicine with choleric, chologogue and laxative properties to stimulate appetite and to treat liver insufficiency and hypercholesterolaemia. In France it is regarded as a liver tonic and hepatoprotective ('wringing out of the hepatic sponge') and as a depurative.^{3,4} The Quechua community of northern Bolivia use an infusion of Globe Artichoke leaf for cirrhosis of the liver and colic caused by gallstones.⁵

Important constituents include the bitter tasting sesquiterpene lactone cynaropicrin as well as caffeic acid derivatives (including cynarin) and flavonoids.¹

Clinical Studies

Several uncontrolled studies have found Globe Artichoke extract to be a beneficial treatment for **dyspepsia**. In two postmarketing studies, globe artichoke (equivalent to about 7 g/day dried herb) improved symptoms such as nausea, vomiting, abdominal pain, constipation, belching, flatulence and **fat intolerance**.⁶⁻⁸ In another study, dosage of 1.6 or 3.2 g/day dried herb significantly reduced dyspeptic symptoms from baseline and improved health-related quality of life.⁹

A review of controlled trials to June 2008 suggests that there is preliminary evidence for a **cholesterol-lowering effect** of Globe Artichoke, although more rigorous trials are required.¹⁰ The dosage required is likely to be

relatively high though – one of the lowest dosages of standardised extract administered in a controlled trial was equivalent to 6.4 g/day of dried herb.¹¹

St Mary's Thistle

For centuries *Silybum marianum* has been recommended in Europe for the treatment of liver disorders,¹² and more recently for jaundice, gallstones, gallbladder colic, hepatitis and haemorrhoids.¹³ In the traditional medicine of Germany, the fruit is regarded as a chologogue, hepatoprotective and stimulant of portal circulation.¹² It is used traditionally in France for digestive disorders due to reduced liver function.¹⁴ In addition to many of these indications St Mary's Thistle was also used by the Eclectic physicians for splenic, hepatic and renal congestion.¹⁵ It is used in other countries such as Pakistan for haemorrhage and liver diseases,¹⁶ and in Bulgaria for liver and gallbladder diseases.¹⁷

St Mary's Thistle fruit contains an active, flavanolignan mixture known as silymarin, which consists mainly of silybin, isosilybin, silychristin and silydianin.¹⁸

Clinical Studies

Based on clinical evidence the German Commission E recommends that standardised extract of St Mary's Thistle containing 200-400 mg/day of silymarin be used for treatment of toxic **liver damage** and as supportive treatment in chronic inflammatory liver disease and cirrhosis.¹⁹

Placebo-controlled trials conducted in Iran found that treatment with silymarin (140 mg/day, for 2 months;²⁰ 280 mg/day, for 6 months²¹) significantly improved liver enzymes (transaminases) in patients with **non-alcoholic fatty liver disease**.

Improvement in transaminases occurred in 85% of patients with **alcohol-related liver disorders** (80-160 mg/day of silymarin, for 5 weeks) in a surveillance study.²² In a small, uncontrolled trial, silymarin (420 mg/day, for one year) improved liver enzymes in

patients with primary sclerosing cholangitis (a **cholestatic liver disease**).²³

In **gallstone** patients and in cholecystectomised patients, silymarin (420 mg/day for 30 days) reduced biliary cholesterol concentration and bile saturation index compared to placebo treatment.²⁴

Dandelion Root

Taraxacum officinalis root is a choleric, cholagogue, bitter tonic and mild laxative herb used traditionally for liver and gallbladder disorders such as inflammation of the gallbladder, gallstones, jaundice, dyspepsia with constipation and chronic skin conditions.^{15,25,26}

Fringe Tree

Chionanthus virginica is native to the United States. It is a large shrub or small tree that can grow to about 20 feet (6 m) and has showy, creamy white flowers. The bark of the root has been used traditionally by native Americans and western herbalists. But harvest of the root bark often results in death of the tree.

One strategy to solve destructive harvesting is use a different part of the plant (e.g. leaves, stem) instead of the underground parts. But it is necessary to evaluate how the chemical composition of the various parts of the plant compare.²⁷ A phytochemical comparison of *Chionanthus virginica* has found that similar major compounds (especially lignans and secoiridoids) are present in the root bark and the stem bark. Although the ratios of these constituents vary, the stem bark provides a good substitute for the root bark. As the relative amount of major constituents is a little lower, an increase in the dosage of stem bark may be necessary.²⁸

Fringe Tree root bark is a cholagogue, laxative and depurative herb. Popularised by the Eclectics, it has been used in western herbal medicine for poor appetite, dyspepsia, liver disease, jaundice, inflammation of the liver or gallbladder, bilious headache, enlargement of the liver or spleen and skin and bowel disorders due to reduced or disordered liver function.^{15,25,29}

Bupleurum

In traditional Chinese medicine (TCM) Bupleurum is used to regulate the gastrointestinal system, to soothe and restore liver function and “to lift and set free the gallbladder qi”.³⁰
³² It has been used to treat cholecystitis, flatulence, indigestion and hepatitis.³³⁻³⁵ In Korea, Bupleurum is regarded as a liver tonic.³⁶ It is a major component in Japanese traditional prescriptions for the treatment of hepatobiliary diseases.³⁷

Active constituents of Bupleurum are the triterpenoid saponins known as the saikosaponins. The content of saikosaponins in the root varies, but should be at least 1.5%.³⁸

Oral administration of a mixture of saikosaponins (6 mg/day) for 12 months significantly reduced serum liver transaminase levels in patients with chronic hepatitis, compared with controls.^{37,39}

Synergistic Formulation

These five herbs would complement each other in a very potent formulation with the following actions: choleric, cholagogue, liver toning, hepatoprotective and mild laxative.

Indications

- Poor digestive function, including dyspepsia; loss of appetite, intestinal bloating.
- Poor liver function; flatulence, nausea, constipation due to sluggish liver.
- Conditions associated with deficient bile production; symptoms associated with gallbladder dysfunction.
- Skin and gastrointestinal disorders associated with reduced or disordered liver function.

Cautions and Contraindications

Globe Artichoke is contraindicated in blockage of the gallbladder.

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