BIOGENESIS® NUTRACEUTICALS, INC

BioLiv (Lipotrophic Support Formula)
Serving Size 3 capsules
Servings Per Container 30

	Amount Per Serving
Vitamin B6 (pyridoxal 5'-phosphate)	4.5 mg
Folate (calcium folinate)	108 mcg
Vitamin B12 (cyanocobalamin)	9 mcg
Magnesium (citrate)	27 mg
Choline (bitartrate)	200 mg
Liver (abgland)	150 mg
DL-methionine	100 mg
Inositol	100 mg
Betaine (HCl)	50 mg
Dandelion root (*Teraxacum officinale*)	50 mg
Green tea leaf (*Camellia sinensis*)(50%)	50 mg
L-taurine	50 mg
Milk thistle seed powder (*Silybum marianum*)	50 mg
Ox bile (bovine)	50 mg
Tumeric root extract (*Curcuma longa*, 95%)	50 mg
Beet root (*Beta vulgaris*)	25 mg
Black radish root (*Raphanus sativus*)	25 mg

OTHER INGREDIENTS: Rice flour, gelatin, silica.

SUGGESTED USE: As a dietary supplement, take 1 capsule three times per day or as directed by your healthcare professional.

BIOLIV

SUPPORT FOR HEALTHY LIVER FUNCTION

- **Phytonutrient and antioxidant liver protection**
- **Cholagogues for healthy gallbladder function**
- **Enhanced liver detoxification capacity**

PYRIDOXAL 5'-PHOSPHATE (VITAMIN B6) is involved in the metabolism of amino acids and glycogen. It is a coenzyme in the synthesis of nucleic acids, hemoglobin, neurotransmitters (serotonin, dopamine, norepinephrine and gama-aminobutyric acid) and many other compounds. P 5'-P is a coenzyme for over 100 enzymes, including the transaminases (some liver specific) and decarboxylases. Along with folic acid and vitamin B12, vitamin B6 lowers homocysteine, an independent risk factor for cardiovascular dysfunction.

FOLIC ACID, like vitamin B6, is a member of the B vitamin family. B vitamins play key roles in healthy liver detoxification pathways. Folic acid appears to be more important than either B6 or B12 in reducing elevated homocysteine levels. Folate specializes in one carbon or methyl transfers. As such, it aids the liver in establishing healthy methyl transfer functions. Folate is essential for DNA replication and repair. It is indicated for the prevention of some birth defects.

VITAMIN B12 is part of the trinity of B vitamins shown to reduce the risk of arteriosclerosis and coronary heart disease. It does this through its role in lowering homocysteine levels. B12, along with folate, is involved with DNA and RNA synthesis, as well as genetic and neurological integrity. B12, folate, and B6 are important cofactors in red blood cell production, as well as healthy detoxification process in the liver.

CHOLINE is necessary for the structure and function of all cells. Choline is the precursor to phosphatidyl choline, sphingomyelin, acetylcholine, and the methyl donor betaine (trimethylglycine). A low choline diet can result in fatty infiltration of the liver. Choline prevents fat deposition in the liver through its lipotropic action. Other well known lipotropics include folic acid, vitamin B12, and methionine. Choline supports liver function and may be helpful in some disorders of the liver.

TEL: 425.487.0788 / 866.272.0500 **FAX: 425.485.3518** **www.bio-genesis.com**

BIOLIV

METHIONINE may protect against the hepatotoxic effects of acetaminophen. By virtue of its sulfur content, its chelating ability, and its antioxidant activity, it has been shown to have anti-hepatotoxic activity. Methionine supports the production of the antioxidant glutathione.

INOSITOL is also a lipotropic agent. As such it may help protect against increases in total cholesterol and fatty acids in the liver.

TAURINE is an antioxidant. It is reported to have hypocholesterolemic, antiatherogenic, and detoxifying activity. Taurine enhances bile acid synthesis. It has been shown in animal and human studies to reduce blood pressure in hypertensives, but not normotensive individuals. Taurine administration reduces fat in the stool (steatorrhea) of cystic fibrosis patients. Taurine may decrease insulin resistance explaining its antidiabetic activity in animals. Taurine is inotropic. Cardiomyopathy and congestive heart failure patients benefit from its use. Taurine is essential for healthy liver detoxification processes.

Betaine HCL (trimethylglycine) acts as a lipotropic agent reversing or preventing fatty degeneration of the liver (steatosis). Choline and methionine have also been shown to posses these qualities. Trimethylglycine and choline act as methyl donors necessary for the production of the body's principal methyl donor: SAMe. It is thought that through its enhancement of SAMe production, Trimethylglycine has a protective effect against ethanol and carbon tetrachloride hepatic damage in animals. Like B6, folate and B12, trimethylglycine helps to lower elevated homocysteine levels.

GLANDULARS: Liver extract and ox bile act as trophic agents to enhance regenerative capacity and normalize bile flow.

BOTANICAL BASE: Turmeric, dandelion, milk thistle, green tea, celandine, black radish, and beet leaf: These botanicals are noteworthy for their hepatoprotective properties. Turmeric (*Curcuma longa*) acts as a choleretic, antihepatotoxic and anti-inflammatory. Dandelion (*Taraxacum officinale*) has cholagogue, diuretic, and appetite stimulant properties. It has been commonly used in liver and gallbladder disorders. Milk thistle (*Silybum marianum*) is also a cholagogue, but has the additional quality of acting as a hepatoprotectant and stimulant of hepatocyte regenerative capacity. Green tea extract (*Camellia sinensis*) is known for its hepatoprotectant properties due to its content of various catechins. Celandine (*Chelidonium majus*) acts as an antispasmodic, reducing pain of the bile ducts and the gastrointestinal tract. Its common use has been for liver and gallbladder complaints. Black radish (*Raphanus sativus*) acts as a secretagogue for the upper gastrointestinal tract, enhancing motility. Beet leaf (*Beta vulgaris*) is high in betaine (trimethylglycine). It acts to reduce fatty infiltration of the liver.

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