

FUNCTIONALAB

BEAUTY NUTRITION

Silymarin/Milk Thistle

Liver health support*

DESCRIPTION

Provides protection from free radicals, and helps support and enhance healthy liver function.*

FUNCTIONS

Milk thistle, a common herb native to the Mediterranean, has been widely used for its nutritional support of liver function for over 2,000 years. Seeds of the dried milk thistle flower are rich in silymarin, a bioflavonoid complex of three flavonolignins: silybin, silydianin, and silychristin. Silymarin is responsible for milk thistle's powerful protective and regenerative activities in the liver.

The liver is the body's detoxifying organ, disabling toxins such as ethanol, environmental poisons, pesticides, and certain pharmaceuticals. In addition to its detoxification properties, the liver plays an essential role in protein, carbohydrate, and lipid metabolism, cholesterol synthesis, bile secretion, and storage of fat-soluble vitamins. When damaged or diseased, the liver's ability to eliminate toxins and perform its numerous other functions may be severely impaired. Silymarin has been shown to support and enhance normal, healthy liver function through three primary actions. By binding to the outer cell membrane, silymarin prevents harmful toxins from entering the cell. Silymarin further protects the liver as an important component of the liver's antioxidant defense. The liver generates potentially damaging, toxic free radicals and reactive oxygen species (e.g. peroxides) as a result of its normal metabolic and detoxifying functions. Left unchecked, these radicals can damage the cell structure and interfere with normal cell functions. Fortunately, silymarin provides support for free radical damage. Furthermore, silymarin enhances levels of glutathione and superoxide dismutase, two primary antioxidants in the liver.

In addition to its protective functions, silymarin stimulates damaged liver cells to regenerate. In the cell nucleus, silymarin augments the production of ribosomes, stimulating protein synthesis in the damaged cell. This results in expedited cell regeneration, the replacement and repair of damaged cells.

FORMULA (#20208-90)

Each capsule contains:

Milk Thistle 150 mg
(*Silybum marianum*)
Standardized to 80% Silymarin
(North America, Europe, moderate climates)

SUGGESTED USE

Adults take 1 capsule daily between meals or as directed.

SIDE EFFECTS

No adverse effects have been reported.

STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

REFERENCES

- Allain, H, Schuck, S, Lebreton, S, Strenge-Hesse, A, Braun, W, Gandon, JM, Brissot, P. Aminotransferase levels and silymarin in de novo tacrine-treated patients with Alzheimer's disease. *Dement Geriatr Cogn Disord* 1999;10:181-5.
- Bass, NM. Is there any use for nontraditional or alternative therapies in patients with chronic liver disease? [In Process Citation]. *Curr Gastroenterol Rep* 1999;1:50-6.
- Berkson, BM. A conservative triple antioxidant approach to the treatment of hepatitis C. Combination of alpha lipoic acid (thioctic acid), silymarin, and selenium: three case histories. *Med Klin* 1999;94 Suppl 3:84-9.
- Edwards, J, Grange, LL, Wang, M, Reyes, E. Fetoprotectivity of the flavanolignan compound siliphos against ethanol- induced toxicity [In Process Citation]. *Phytother Res* 2000;14:517-21.
- Farghali, H, Kamenikova, L, Hynie, S, Kmonickova, E. Silymarin effects on intracellular calcium and cytotoxicity: a study in perfused rat hepatocytes after oxidative stress injury. *Pharmacol Res* 2000;41:231-7.
- Flora, K, Hahn, M, Rosen, H, Benner, K. Milk thistle (*Silybum marianum*) for the therapy of liver disease [see comments]. *Am J Gastroenterol* 1998;93:139-43.
- Kropacova, K, Misurova, E, Hakova, H. Protective and therapeutic effect of silymarin on the development of latent liver damage. *Radiats Biol Radioecol* 1998;38:411-5.
- Par, A, Roth, E, Rumi, G, Jr., Kovacs, Z, Nemes, J, Mozsik, G. [Oxidative stress and antioxidant defense in alcoholic liver disease and chronic hepatitis C]. *Orv Hetil* 2000;141:1655-9.
- Zhao, J, Sharma, Y, Agarwal, R. Significant inhibition by the flavonoid antioxidant silymarin against 12-O-tetradecanoylphorbol 13-acetate-caused modulation of antioxidant and inflammatory enzymes, and cyclooxygenase 2 and interleukin-1alpha expression in SENCAR mouse epidermis: implications in the prevention of stage I tumor promotion. *Mol Carcinog* 1999;26:321-33.
- Zhao, J, Agarwal, R. Tissue distribution of silibinin, the major active constituent of silymarin, in mice and its association with enhancement of phase II enzymes: implications in cancer chemoprevention. *Carcinogenesis* 1999;20:2101-8

www.functionalab.com
1-866-969-7068

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**