

# Liver

45 vegetable capsules – Code FE0210 / 90 vegetable capsules FE0206



A food supplement consisting of a combination of **7** high quality **plant extracts** such as milk thistle (80% silymarin), beetroot, black radish, turmeric (95% curcuminoids), dandelion (3% flavonoids) artichoke leaves (5% cynarine), schizandra (9% schisandrins) and **lipoic acid**.

**HEALTH CLAIMS (EU Regulation 432/2012):** *Milk thistle, dandelion, artichoke, turmeric, and schizandra are plants which help maintain the health of the liver. Artichoke contributes to intestinal comfort, and curcumin helps reduce the inflammation and oxidative stress.*



**FORMAT/S:** 45 and 90 vegetable capsules

## FORMULA

**Ingredients:** Milk thistle extract (*Silybum marianum*), oriental radish root (*Raphanus sativus* var. *niger*), beet root (*Beta vulgaris*), DL-alpha-lipoic acid, turmeric extract (*Curcuma longa*), dandelion root extract (*Taraxacum officinale*), schizandra extract (*Schisandra chinensis*), artichoke leaf extract (*Cynara scolymus*), vegetable magnesium stearate and silicon dioxide (anticaking agents), vegetable capsule (hydroxypropylmethylcellulose; purified water).

<b>Nutritional information:</b>	<b>3 capsules</b>
Milk thistle <sup>1</sup> ( <i>Silybum marianum</i> ) (80% silymarin)	750 mg
Oriental radish ( <i>Raphanus sativus</i> var. <i>niger</i> )	360 mg
Beet ( <i>Beta vulgaris</i> )	360 mg
DL-alfa-Lipoic acid	150 mg
Dandelion <sup>1</sup> ( <i>Taraxacum officinale</i> ) (3% flavonoids)	150 mg
Turmeric <sup>1</sup> ( <i>Curcuma longa</i> )* (95% curcuminoids*)	150 mg
Schizandra <sup>1</sup> ( <i>Schisandra chinensis</i> ) (9% schisandrins)	150 mg
Artichoke <sup>1</sup> ( <i>Cynara scolymus</i> ) (5% cynarine)	105 mg

<sup>1</sup> standardised extract / \* providing curcumin I, demethoxycurcumin, and bisdemethoxycurcumin.

## Cautions:

Consult a health-care practitioner if you are pregnant or breast-feeding, if you are treated with medication, (like anti-platelet medication or anticoagulants) or if you have a special medical condition, especially if you have liver or gall bladder disease and/or intestinal obstruction. Do not use if you are allergic to plants of the Asteraceae/Compositae/daisy family.

## Recommended daily dose:

1 or 2 capsules three times daily before meals. Maximum 6 capsules daily. Do not exceed the stated recommended daily dose.

## Indications and uses:

Different studies have shown the ingredients in LIVER can relieve the following conditions:

- Problems related with the liver and its function, offering a well-rounded plan for reconstruction, cleansing and detoxification.
- It provides the perfect protection for smokers and drinkers and people who live or work in highly polluted areas.
- It alleviates stress and strengthens the liver's ability to eliminate toxins under the connective tissue of the skin, leading to healthy, glowing skin.

## DETAILS:

**LIVER** is a formulation with 8 ingredients well known for their beneficial effects on the liver. This formula nutritionally supports the liver's ability to maintain its normal function. The nutrients have shown positive effects in the treatment of almost all hepatic diseases due to their ability to inhibit the factors responsible for hepatic damage. These nutrients have tonic properties that help the spleen, pancreas and kidneys.

LIVER also helps dissolve kidney and gallstones and stimulates liver cell reproduction, and is good for hepatitis, jaundice, anaemia, acne and skin conditions. For this reason, good liver function results in young looking skin, free of age spots, and favours clear vision since eye health depends on liver health.

Other nutrients in **LIVER** act as powerful antioxidants, inhibiting lipid peroxidation in liver cells. It also contains water soluble peptides, rich in methionine; this amino acid contains sulfur, with strong antioxidant properties that detoxify the liver, helping with the rejuvenation process.

**LIVER** is a complete formula that helps the liver continue its work. It helps eliminate depression, headaches and unhealthy skin due to excessive toxins.

---

## INGREDIENTS:

**MILK THISTLE:** contains flavonoids (silybin, silydianin, silymarin). This plant has been valued for centuries for its medicinal and nutritional properties. In the Middle Ages the seeds were used to treat liver disorders and promote bile flow, and as a general tonic for the stomach, gallbladder, female organs and liver.

Numerous clinical trials have shown that silymarin, one of the flavonoids in milk thistle, counteracts the toxic effects of a variety of venoms, including alcohol, carbon tetrachloride, acetaminophen overdose and the mushroom *amanita phalloides*<sup>(3)</sup>. The mechanism of action of silymarin involves altering the membranes of hepatic cells in order to inhibit the passage of toxins and increase cell regeneration by means of protein synthesis stimulation<sup>(1,2,5)</sup>.

Silymarin also acts as an antioxidant and inhibits inflammatory enzymes. Recent research indicates that silymarin helps protect against glutathione exhaustion in liver cells.

Milk thistle extract has been the object of numerous studies and clinical tests due to its powerful properties that protect and regenerate the liver<sup>(1-5)</sup>.

**LIPOIC ACID:** This is a non-vitamin nutrient which is essential to life. It is not classified as a vitamin because it is produced in the body, but not always in sufficient amounts.

Lipoic acid is related to the Krebs cycle and the production of energy needed by the body. All bodily functions depend on sufficient energy sources for optimal function.

Lipoic acid supplements can improve one's physical state, especially under stressful conditions<sup>(6,7)</sup>.

In diverse studies, lipoic acid has been seen to protect against the effects of toxic metals on the liver, as long as the lipoic acid gets to the liver first and the amount of toxins in the liver is not overly abundant<sup>(8,9)</sup>.

It is very useful for cases of hepatitis.

Lipoic acid supplementation is appropriate in any case requiring increased energy. This includes support for athletes, liver repair and protection, energy for the brain and the immune system and general vitality<sup>(6-9)</sup>.

**BEETROOT:** Beetroot is especially useful for stimulating, cleaning and regenerating the liver. It increases bile flow to the intestine<sup>(10)</sup>.

**ORIENTAL RADISH:** This important ingredient can lower bilirubin blood levels through its liver cleansing action. Radish has been proven one of the best plants for treating gallbladder congestion. It regenerates, cleans and regulates liver function<sup>(11,12)</sup>.

**DANDELION:** The main therapeutic action of this plant lies in its content of taraxacin and several terpenoids. It also has relatively high amounts of choline, an important nutrient for the liver. It is pharmacologically related to digestion, liver function and diuresis. Dandelion root stimulates bile and improves liver congestion, bile duct inflammation, hepatitis and gallstones. The bile-increasing action of this plant is two-fold: on the one hand it directly affects the liver, increasing bile production and flow to the gallbladder, and on the other hand it has a diuretic effect on the gallbladder, causing its contraction and release of retained bile.

The high choline content of the root might be the greatest factor in the plant's ability to act as liver tonic<sup>(13,14)</sup>.

**SCHISANDRA:** This plant has a long history in traditional Chinese medicine because of its curing properties for a multitude of diseases, and currently numerous studies have proven its effectiveness. Clinical trials highlight its liver protective and detoxifying effects thanks to its content in antioxidant lignans, especially schisandrin, which is found in the seeds of the fruit. It has adaptogenic activity, improving the body's ability to face stress, whether it be mental, physical (such as blood sugar variation) or environmental (atmospheric pressure). It also has the property of modulating the immune system, improving both cell mediated immune response and humoral immune response<sup>(15-17)</sup>.

**TURMERIC:** Turmeric contains curcumin, a volatile oil. Curcumin has shown similar liver protection to that of silymarin, and this protection is the result of its powerful antioxidant activity. Curcumin also has antiinflammatory and choleric effects, increasing total bile acid production by 100%<sup>(18,19)</sup>. It acts in synergy with dandelion, artichoke and milk thistle.

**ARTICHOKE:** Artichoke contains 5% Cynarine and Scolymoside, which have been proven to stimulate bile secretion. Cynarine has been shown to be effective at lowering cholesterol and triglycerides, and it also exerts a regenerative action on liver cells. Artichoke has diuretic properties and has been used to treat ailments of the liver and kidney as well as poor digestion<sup>(20,21)</sup>. It acts in synergy with turmeric and milk thistle.

---

## References:

- 1) Flora, K., Hahn, M., Rosen, H., & Benner, K. (1998). Milk thistle (*Silybum marianum*) for the therapy of liver disease. *The American journal of gastroenterology*, 93(2), 139-143.
- 2) Luper, S. (1998). A review of plants used in the treatment of liver disease: part 1. *Alternative medicine review: a journal of clinical therapeutic*, 3(6), 410-421.
- 3) Ball, K. R., & Kowdley, K. V. (2005). A review of *Silybum marianum* (milk thistle) as a treatment for alcoholic liver disease. *Journal of clinical gastroenterology*, 39(6), 520-528.
- 4) Tamayo, C., & Diamond, S. (2007). Review of clinical trials evaluating safety and efficacy of milk thistle (*Silybum marianum* [L.] Gaertn.). *Integrative cancer therapies*, 6(2), 146-157.
- 5) Post-White, J., Ladas, E. J., & Kelly, K. M. (2007). Advances in the use of milk thistle (*Silybum marianum*). *Integrative cancer therapies*, 6(2), 104-109.
- 6) Vilaplana, M. (2007). Antioxidantes presentes en los alimentos. *OFFARM*, 26(10).
- 7) Packer, L., Witt, E. H., & Tritschler, H. J. (1995). Alpha-lipoic acid as a biological antioxidant. *Free Radical Biology and Medicine*, 19(2), 227-250.
- 8) Biewenga, G. P., Haenen, G. R., & Bast, A. (1997). The pharmacology of the antioxidant lipoic acid. *General Pharmacology: The Vascular System*, 29(3), 315-331.
- 9) Busse, E., Zimmer, G., Schopohl, B., & Kornhuber, B. (1992). Influence of alpha-lipoic acid on intracellular glutathione in vitro and in vivo. *Arzneimittel-Forschung*, 42(6), 829-831.
- 10) Escribano, J., Pedreño, M. A., García-Carmona, F., & Muñoz, R. (1998). Characterization of the antiradical activity of betalains from *Beta vulgaris* L. roots. *Phytochemical Analysis*, 9(3), 124-127.
- 11) Lugasi, A., Dworschák, E., Blazovics, A., & Kery, A. (1998). Antioxidant and free radical scavenging properties of squeezed juice from black radish (*Raphanus sativus* L. var niger) root. *Phytotherapy Research*, 12(7), 502-506.
- 12) Wang, L. S., Sun, X. D., Cao, Y., Wang, L., Li, F. J., & Wang, Y. F. (2010). Antioxidant and pro-oxidant properties of acylated pelargonidin derivatives extracted from red radish (*Raphanus sativus* var. niger, Brassicaceae). *Food and Chemical Toxicology*, 48(10), 2712-2718.
- 13) Williams, C. A., Goldstone, F., & Greenham, J. (1996). Flavonoids, cinnamic acids and coumarins from the different tissues and medicinal preparations of *Taraxacum officinale*. *Phytochemistry*, 42(1), 121-127.
- 14) Jeon, H. J., Kang, H. J., Jung, H. J., Kang, Y. S., Lim, C. J., Kim, Y. M., & Park, E. H. (2008). Anti-inflammatory activity of *Taraxacum officinale*. *Journal of ethnopharmacology*, 115(1), 82-88.
- 15) Panossian, A., & Wikman, G. (2008). Pharmacology of *Schisandra chinensis* Bail.: an overview of Russian research and uses in medicine. *Journal of ethnopharmacology*, 118(2), 183-212.
- 16) Alok, S., Jain, S. K., Verma, A., Kumar, M., Mahor, A., & Sabharwal, M. (2014). Herbal antioxidant in clinical practice: A review. *Asian Pacific journal of tropical biomedicine*, 4(1), 78-84.
- 17) Huyke, C., Engel, K., Simon-Haarhaus, B., Quirin, K. W., & Schempp, C. M. (2007). Composition and biological activity of different extracts from *Schisandra sphenanthera* and *Schisandra chinensis*. *Planta medica*, 73(10), 1116-1126.
- 18) Ammon, H. P., & Wahl, M. A. (1991). Pharmacology of *Curcuma longa*. *Planta medica*, 57(01), 1-7.
- 19) Chainani-Wu, N. (2003). Safety and anti-inflammatory activity of curcumin: a component of turmeric (*Curcuma longa*). *The Journal of Alternative & Complementary Medicine*, 9(1), 161-168.
- 20) Wang, M., Simon, J. E., Aviles, I. F., He, K., Zheng, Q. Y., & Tadmor, Y. (2003). Analysis of antioxidative phenolic compounds in artichoke (*Cynara scolymus* L.). *Journal of agricultural and Food Chemistry*, 51(3), 601-608.
- 21) Zhu, X., Zhang, H., & Lo, R. (2004). Phenolic compounds from the leaf extract of artichoke (*Cynara scolymus* L.) and their antimicrobial activities. *Journal of agricultural and food chemistry*, 52(24), 7272-7278.