

Liver FX



Clinical Applications

- Support Healthy Liver Function
- Protect Liver Tissue
- Support Natural Anti-Inflammatory Mechanisms to Combat Liver Inflammation
- Support Healthy Glutathione Levels
- Support Healthy Liver Enzyme Levels

Liver FX contains N-Acetyl Cysteine, well-known to support liver function through its action on glutathione conjugation and sulfation; along with a triple antioxidant combination (alpha lipoic acid, silymarin and selenium) that protects the liver from free radical damage, regenerates/boosts levels of other important antioxidants in the body and interferes with viral proliferation.

Liver FX Meets or Exceeds cGMP quality Standards

Discussion

N-Acetyl Cysteine, the acetylated derivative of the sulfur-containing amino acid, L-cysteine is a precursor of glutathione, a very potent, protective intracellular antioxidant responsible for cellular defense against hepatotoxic environmental pollutants, gamma-radiation and other insults that can damage DNA of liver cells.^[1,2]

Alpha Lipoic Acid, sometimes referred to as thioctic acid, is both water- and fat-soluble. It boosts levels of glutathione, helps regenerate antioxidant vitamins C and E, helps maintain the ratio of reduced to oxidized CoQ10 in the mitochondria, and prevents overproduction of nitric oxide in the liver and kidney in the case of toxic exposure.^[3] The lipoic acid/dihydrolipoic acid redox couple stabilizes NF kappaB transcription factor, thereby inhibiting the ability of viruses to replicate.^[4,5]

Milk Thistle Extract's active component, silymarin, has been used for hundreds of years as a powerful hepatoprotectant. Its potent antioxidant action neutralizes the toxins that can destroy cellular membrane systems and protects the hepatocytes' genetic material. Like alpha lipoic acid, silymarin increases cellular glutathione. Its actions in the liver also include preventing peroxidation of fats, preventing formation of fibrous tissue, reducing inflammation, supporting a healthy immune response and promoting protein synthesis and regeneration of liver tissue.^[6]

Selenium (as selenomethionine), an important coenzyme for the glutathione peroxidase detoxification system, also appears to improve the antioxidant defense of hepatocytes by up-regulating their MnSOD expression. At the same time, selenium appears to decrease MnSOD and IL-6 transcription in Kupffer cells reducing their inflammatory response to stimuli.^[7]

Many years ago, Dr. Burton M. Berkson chose to combine alpha lipoic acid, silymarin and selenium (all present in Liver FX) into an efficacious and low cost liver support protocol because these substances protect the liver from free radical damage, boost the levels of other basic antioxidants and interfere with proliferation of viruses. Dr. Berkson published case histories of three patients who used this conservative triple antioxidant protocol, avoided expensive conventional procedures, regained health and daily function.^[8]

RXFX
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Liver FX



Supplement Facts

Serving Size: 1 Capsule
Servings Per Container: 60



	Amount Per Serving	%Daily Value
Selenium (as selenomethionine)	100 mcg	**
Alpha Lipoic Acid	200 mg	**
Silymarin (from milk thistle extract)	210 mg	**
N-Acetyl-L-Cysteine	200 mg	**

** Daily Value not established.

Other Ingredients: HPMC (capsule), magnesium stearate, water.

Dosing:

Take one capsule twice daily or as directed by your healthcare practitioner.

References:

1. Hu C, Jiang L, et al. Possible involvement of oxidative stress in trichloroethylene-induced genotoxicity in human HepG2 cells. *Mutat Res.* 2008 Jan 18 [PMID: 18289923]
2. Mansour HH, et al. Protective effect of N-acetylcysteine against radiation induced DNA damage and hepatic toxicity in rats. *Biochem Pharmacol.* 2008 Feb 1;75(3):773-80. [PMID: 18028880]
3. Abdel-Zaher AO, The potential protective role of alpha-lipoic acid against acetaminophen-induced hepatic and renal damage. *Toxicology.* 2008 Jan 20;243(3):261-70. [PMID: 18068886]
4. Suzuki YJ, Aggarwal BB, Packer L. Alpha-lipoic acid is a potent inhibitor of NF-kappa B activation in human T cells. *Biochem Biophys Res Commun.* 1992 Dec 30;189(3):1709-15 [PMID: 1482376]
5. Bauer A, Harrer T, et al. Alpha lipoic acid is an effective inhibitor of human immunodeficiency virus replication. *Klim Wochenschr* 1991;69:722-4. [PMID: 1724477]
6. Pradhan SC, Girish C. Hepatoprotective herbal drug, silymarin from experimental pharmacology to clinical medicine. *Indian J Med Res.* 2006 Nov;124(5):491-504. [PMID: 17213517]
7. Shilo S, et al. Selenium supplementation increases liver MnSOD expression: molecular mechanism for hepato-protection. *J Inorg Biochem.* 2008 Jan;102(1):110-8. [PMID: 17804075]
8. Berkson BM. A conservative triple antioxidant C. *Medizinische Klink.*1999;94:Suppl III:84-9

Cautions:

Avoid if history of or current peptic or duodenal ulcer. Consult your healthcare practitioner prior to use if you have or suspect you have a medical condition, are taking prescription drugs, or are pregnant or lactating.

Additional references available upon request.

*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.

