



# Milk Thistle Combination

Powerful herbs and nutrients for protecting and healing the liver

In modern society, the liver carries a heavy burden. Every food additive we consume, every pollutant in our drinking water, every pesticide residue, every drug we take, and in fact, just every chemical we are exposed to will need to be processed by the liver in order to be eliminated from the body.

Milk Thistle Combination is a powerful blend of herbs and nutrients that help to protect the liver against chemical poisons and improve the liver's ability to detoxify at the same time. The formula is useful for a wide variety of liver ailments, including alcoholic and chemical poisoning, hepatitis, and even cirrhosis of the liver. It can also help with gall stones, a sluggish gallbladder and skin conditions like psoriasis and dermatitis. People who are, or have been, exposed to chemicals may wish to use this blend. It is also a good choice for those suffering from liver diseases.

Here are the ingredients in this formula and their benefits.

## Milk Thistle

Milk thistle seeds contain a powerful blend of flavonolignans (silybin, silychristin, silydianin and isosilybin) collectively called silymarin. This formula contains an extract of milk thistle seed that is 80% silymarin. These flavonolignans have been shown to bind with cellular membranes in the liver and protect them from chemicals and toxins. Examples of compounds milk thistle will protect the liver against include alcohol, tetracycline, acetaminophen, thallium, erythromycin, amitriptyline and carbon tetrachloride. It can also reduce side effects from chemotherapy. It is even used in hospitals in Europe to treat poisoning from Amanita (death cap) mushrooms.

Milk thistle has been extensively studied especially in Germany where it has been used with success to treat hepatitis and cirrhosis of the liver. It also enhances the immune system, improves bile flow and may even be helpful for diabetes.

## N-Acetyl-Cysteine (NAC)

N-acetyl-cysteine raises the level of glutathione in the liver. Glutathione is an important antioxidant that detoxifies the liver and protects tissues from free radical damage. Glutathione is depleted by heavy metals. Glutathione is used in removing some toxins from the body via glutathione conjugation. It also enhances sulfation, another important detoxification pathway. N-acetyl-cysteine is particularly helpful for overcoming alcohol, chemical or heavy metal poisoning. It also forms the basis of another compound in the liver, GSH S-transferases, which has been found to reduce and transform toxic and carcinogenic substances into less harmful substances.

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## Dandelion

A traditional remedy for the liver and gallbladder, dandelion root encourages bile production, which is one of the ways the liver gets rid of toxins. It also enhances kidney function, another way the body is able to eliminate toxins.

## Choline

Choline is an essential nutrient necessary for the structure and function of all cells and for sustaining life. A diet low in choline has been shown as early as 1935 to result in fatty deposits in the liver. Choline is found in foods such as peanuts, cauliflower, soy, egg yolks and beef liver. In the form of phosphatidylcholine, it is necessary for normal brain development of the fetus and during infancy.

## Inositol

Inositol is a component of cell membranes and is necessary for proper function of nerves, brain, and muscles in the body. It is used primarily in the treatment of liver problems, depression, panic disorder and diabetes. It works in conjunction with other nutrients to prevent accumulation of fats in the liver and helps in cholesterol reduction.

## Vitamin A (Beta Carotene)

Carotene is what gives orange colored vegetables their hue and is converted by the body into Vitamin A. It helps protect the liver from damage by oxidation.

## Vitamin C

A water soluble vitamin, vitamin C must be obtained from our diet daily as the human body is unable to make it on its own. It is a powerful antioxidant that works inside and outside of cells.

## Usage

Recommended use is 2 tablets twice daily. Rapid detoxification of the liver will occasionally result in a "healing crisis," often involving flushing of the face and upper body, headaches or skin eruptions. If these symptoms occur, reduce dosage or discontinue supplement.

## Selected References

- Herbal Therapy and Supplements* by Merrily Kuhn and David Winston  
*The Encyclopedia of Medicinal Plants* by Andrew Chevallier  
"Long-term (12 months) Treatment with an anti-oxidant drug (silymarin) is effective on hyperinsulinemia, etc." M.Velussi,MD, et.al. *Journal of Hepatology*, April 26, 1997  
*PDR for Nutritional Supplements* edited by S.S. Hendler,PhD and D. Rorvik, [www.naturalopinion.com](http://www.naturalopinion.com)