
Hepatitis C Choices in Care

Naturopathic Medicine and Hepatitis C

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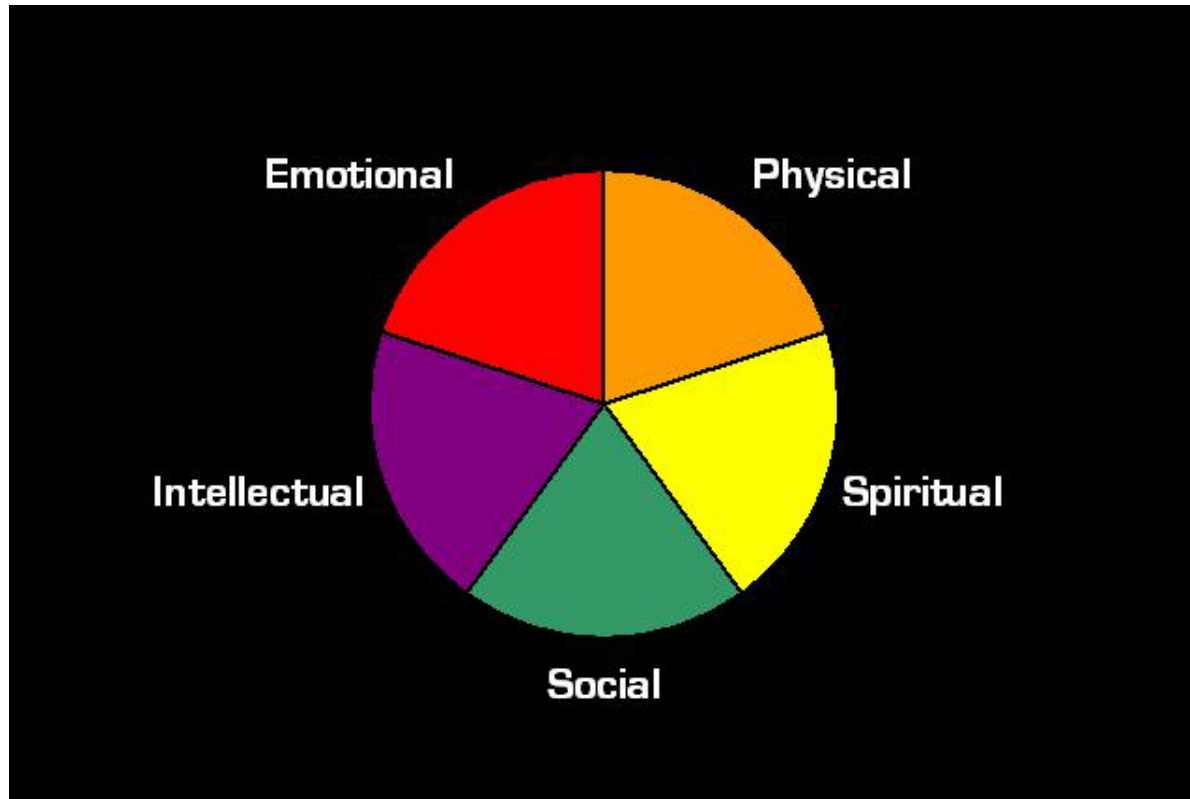


What is Naturopathic Medicine?

The philosophy of naturopathic medicine can best be described as the utilization of the healing power of nature.

What is Naturopathic Medicine?

All of the components of wellness are
equally important !!!



What is Naturopathic Medicine?

Naturopathic healthcare providers use many different tools in the care and treatment of patients.

These include:

- botanical medicines (herbs)
- acupuncture
- nutritional supplements
- traditional Chinese medicine
- homeopathic remedies
- nutrition counseling and diet therapy
- massage and/or spinal manipulation
- exercise
- and other forms of therapy

Naturopathic Medicine and Who May Benefit

Naturopathic treatment options may benefit those who are motivated to adopt the following healthy lifestyle practices including:

- a nutritious diet low in sugar, red meat, and processed foods
- avoidance of smoking, alcohol, and recreational drugs
- regular exercise
- stress management

While these practices are helpful with any therapeutic approach, they are vital to the success of naturopathic treatment.

Limiting Exposure to Liver-Damaging Substances and Situations

- **Alcohol**

- Alcohol consumption is a significant risk factor for liver cirrhosis.

- **Tobacco and Recreational Drugs**

- Both tobacco and marijuana use increase the risk of liver cancer for people infected with HCV

- **Occupational Exposures**

- Exposure to pesticides, herbicides, and other chemicals can cause liver damage and elevation of liver enzymes.

Limiting Exposure to Liver-Damaging Substances and Situations

The potential for drug-herb interactions in people with liver disease is complex and often unpredictable.

Keep all of your healthcare providers informed about all medicines, herbs, and supplements you are taking.

Never take any medicinal product if you are uncertain about what it contains.

Botanical Medicine (herbs)

Botanicals Used to Treat Hepatitis C Liver Problems

■ **Silybum marianum (Milk Thistle)**

- Milk thistle does not seem to significantly influence the course of patients with alcoholic and/or hepatitis B or C liver diseases. Milk thistle could potentially affect liver injury. Adequately conducted randomized clinical trials on milk thistle versus *placebo may be needed*.

■ **Glycyrrhizaglabra (Licorice Root)**

- Glycyrrhiza glabra (licorice root) preparations have been used for over 20 years in Japan to treat both hepatitis B and C.

■ **Other botanicals** (See *Hepatitis C Choices, 4th Edition*, Chapter 14)

Botanicals Used to Treat Extrahepatic Hepatitis C Problems

■ Ginkgo biloba

- Ginkgo biloba extract has been shown to protect brain cells from damage due to aging and oxidative stress.

■ Hypericum perforatum (St. John's wort)*

- Mild depression

***Drugs That Interact with St. John's wort**

prescription antidepressants, oral contraceptives, anticoagulants (Coumadin),
theophylline, indinavir, digoxin, cyclosporin

Talk with your healthcare provider before taking St. John's wort.

Nutrition and Supplementation

Nutritional Supplementation in Hepatitis C

Antioxidants

Minerals

Amino acids

Nutritional co-factors

Why are Antioxidants Important in Hepatitis C ?

Cellular damage occurs in an environment that is high in free radicals and low in antioxidants.

- ❑ This causes cellular damage (inflammation and fibrosis) that occurs as a result of the interaction between the hepatic immune cells and the viral infection.

Antioxidants and Fibrosis

Blood levels of the antioxidants glutathione, vitamin A, vitamin C, vitamin E, and selenium are much lower in HCV+ persons when compared to people the same age and sex who do not have hepatitis C.

Antioxidants in Hepatitis C

- Glutathione is the main antioxidant in liver and all mammalian tissue.
- Glutathione is a sulfur-containing protein that is used in detoxification, immune function, and antioxidant protection in the liver as well as all tissues in the body.
- Glutathione levels are low in people with hepatitis C.

Glutathione and Antioxidants

- Vitamins E and C, alpha-lipoic acid, selenium, and co-enzyme Q help recycle glutathione so it can continue to work as an active antioxidant, detoxification protein, and immune stimulator.
- Silymarin has been shown to raise liver glutathione levels 35%, and is more potent than vitamin E as an antioxidant.

Antioxidants and Fibrosis

- Markers of oxidant stress in those with HCV and low antioxidant levels were closely connected to the amount of fibrosis in the liver.
- The higher the oxidant stress, the more advanced the fibrosis. Fibrosis was also connected to low levels of antioxidants in the blood.

Antioxidants and Fibrosis

- Those in the study with significantly elevated ALT levels (over 100) had the most significant vitamin E deficiencies.
- Genotype 1b had the lowest glutathione levels of all genotypes.

Vitamin A

- High doses of supplemental vitamin A can be toxic to the liver.
- Supplements may be necessary in cases of vitamin A deficiency
- It is safer to supplement with beta-carotene or mixed carotenoids.

Selenium and Liver Cancer

- In a study of 7,342 men with HBV or HCV, those with the highest selenium levels were 40% less likely to get liver cancer than those with the lowest levels.
- 200 mcg of yeast-based selenium decreased the incidence of liver cancer in HBV endemic area of China by 33%.
- Selenium deficiencies more significant in co-infection (HIV/HCV).
- Selenomethionine or yeast-based selenium is safest and most absorbable.

Zinc

- Zinc has been shown to be one of the nutrients that may be deficient in those with hepatitis C.
- Zinc may be useful in the prevention and treatment of hepatic encephalopathy.

Zinc

- Zinc is less absorbable in those with cirrhosis.
 - Zinc is twice as absorbable in those with cirrhosis when taken between meals.
- Zinc citrate, picolinate, septahydrate are more absorbable than zinc oxide, gluconate, or sulfate.

Vitamin E

- Fat soluble vitamin found in oils, cereal grains, animal fats, fruits, and vegetables.
- Naturally occurring vitamin E consists of a complex of 8 different forms found in foods:
 - alpha-tocopherol
 - beta-tocopherol
 - gamma-tocopherol
 - delta-tocopherol
 - 4 types of tocotrienols

Vitamin E

- Most of the vitamin E found in food is gamma-tocopherol.
- Most of the commercially available vitamin E and the form used in many studies is synthetic L-alpha tocopherol isomer (not the d-form).
- The forms used in the recent meta-analysis were not disclosed but can be assumed to be alpha-tocopherol only and probably the L-isomer.

Vitamin E

Synthetic vitamin E (l-alpha tocopherol with no other tocopherols or tocotrienols) has ability to bind to receptor sites, potentially in favor of biologically active forms of vitamin E (d-alpha-, beta-, delta-, and gamma-tocopherol) and may even be harmful.

“Vitamin E over 400 IU is Harmful”

- 135,967 participants in 19 clinical trials.
 - Of these trials, 9 tested vitamin E alone and 10 tested vitamin E combined with other vitamins or minerals.
 - The dosages of vitamin E ranged from 16.5 to 2000 IU/d (median, 400 IU/d).
- Conclusion: high-dosage (>400 IU/d) vitamin E supplements may increase all-cause mortality and should be avoided.

Vitamin E Study

Data showing harmful effects of vitamin E involve subjects with vascular risk factors or who had established cardiovascular disease (CVD).

In contrast, the DATATOP and ADCS studies cited in the study utilized megadoses of vitamin E (2000 IU/day) in individuals with neuro-degenerative disorders rather than CVD, but did not reveal safety concerns with vitamin E.

Vitamin E Study

“In summary, we have trouble accepting the conclusions regarding high dose vitamin E due to the statistical methods used and the lack of controlling for study quality and publication or selection bias. We contend that correction of any one of these factors could negate the marginally significant results. With these problems and multiple other studies suggesting vitamin E has no effect of mortality, telling our patients that it may be harmful seems premature.”

Vitamin E

- May improve response to interferon.
- 1200 IU for 8 weeks in HCV+ completely blocked the biochemical pathway leading to fibrosis.
- Vitamin E at 1200 IU is contraindicated in coumadin therapy and with vitamin K deficiency.

Vitamin E

The most biologically accurate form of vitamin E is the complex:

- ❑ alpha, beta, delta, gamma tocopherol and alpha, beta, delta and gamma tocotrienol

Alpha-Lipoic Acid (ALA)

- ALA has been used to treat diabetic peripheral neuropathy and acute liver failure in Europe.
- Because it is active in both fatty tissue and non-fatty tissue, it has a wide range of activity as an antioxidant.

ALA vs. NAC

- ALA is effective at a lower molecular concentration and a lower dose:
 - 450 mg raised glutathione levels in HIV+ in 14 days
- Doses of 600 mg equivalent in animal and in vitro studies have raised glutathione levels significantly.

S-Adenosyl Methionine (SAMe)

- Used in Europe to normalize bile secretion in chronic liver disease.
- Studies in HBV and HCV showed reduction of itching, jaundice, fatigue, and lowering of bilirubin in median of 16 days.
- Dosages used: 800-1600 mg daily
- Difficulties: cost and storage (easily oxidized)

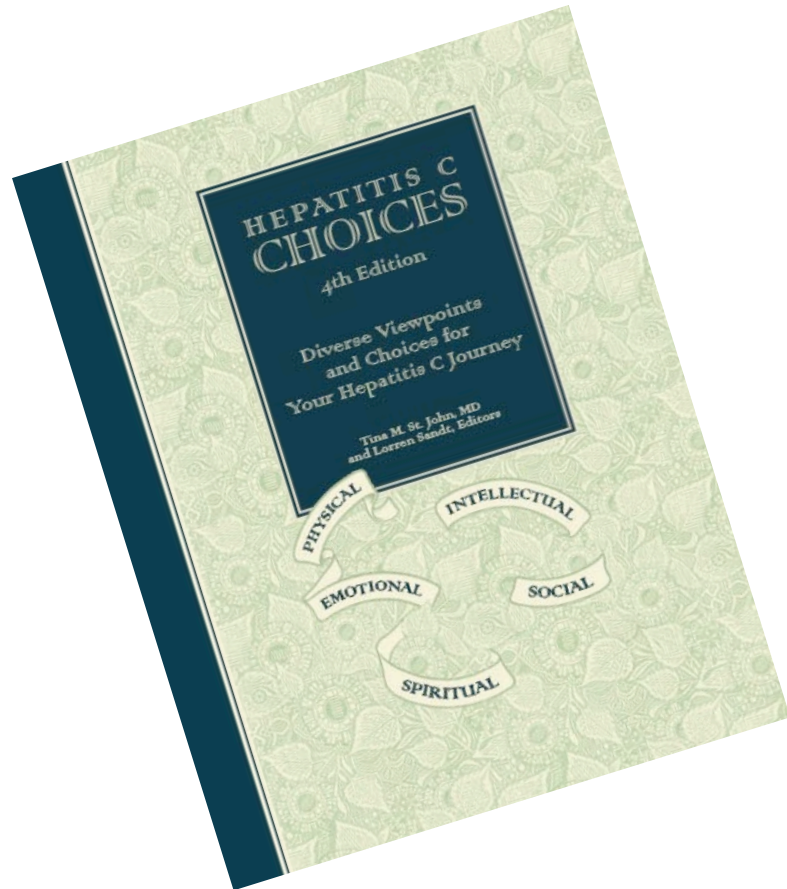
L-carnitine

- 2 grams twice daily helpful in improving hepatic encephalopathy
- 2 grams day may reduce steatosis when given to those on interferon therapy
- 2 grams daily may reduce fatigue during standard interferon therapy

Probiotics

- Bifidobacterium longum effective after 30 days in studies with minimal hepatic encephalopathy

For more information



Chapter 14: Naturopathic Medicine

http://www.hepcchallenge.org/choices/pdf/Chapter_14_OL.pdf

Visit us on line at www.HepCChallenge.org

