

Hepacol™

Hepacol™ is a revolutionary dietary supplement like no other and is specifically formulated to help boost sluggish, deficient liver function and help to detoxify and regenerate liver cells. Manufactured using the proprietary **B.E.E.®** (Bio-Enhanced Extraction) technology, this product offers optimal benefits whereby only the beneficial constituent of the herb is isolated by weight and structure, which quickly releases the active ingredients into the bloodstream for superior, fast results.

How Hepacol™ Works:

Hepacol™ is a powerful antioxidant formula that helps revitalize and optimize liver function by protecting the cells of the liver, blocking the entrance of harmful toxins, removing these toxins from the liver cells and counteracting the harmful actions of viruses, alcohol, drugs and chemicals on the liver. **Hepacol™** helps the liver return to a healthy state, while enhancing immune function and aiding in the prevention of cancer. It also helps lower cholesterol levels and reduces the risk of gallstones. Good results have been obtained in patients with Hepatitis C, alcoholic cirrhosis of the liver, and autoimmune hepatitis. Patients waiting for a liver transplant may even regain sufficient liver function so as to not require a liver transplant.

Hepacol™ is a unique combination of botanical extractions from ginger and pomegranate along with a mineral complex. The botanical extractions are bio enhanced with the patent-pending **B.E.E.®** technology. **Hepacol™** is designed to protect the liver from alcohol, smoking, prescribed drug medications, pesticides and other environmental pollutants and viruses.

Hepacol™ helps boost sluggish, deficient liver function. A sluggish liver can cause symptoms of poor digestion, nausea, sensitivity to alcohol and drugs, irritability and tiredness. **Hepacol™** helps to detoxify and regenerate liver cells.

The liver's optimal function is crucial to overall health because it helps to detoxify and excrete substances that would otherwise be poisonous for the body and the blood. **Hepacol™** is a powerful formula that contains the primary active constituents of the herbs Ginger and Pomegranate, which have been traditionally used to help to stimulate the immune system.

Hepacol™ has been used to help promote a healthier liver function, regain energy that the body needs for daily activities, rejuvenate liver cells and improve its function of processing all of the nutrients the body requires, including protein, glucose, vitamins, and fat, and assist an infected liver in processing toxic substances including alcohol, ammonia, nicotine, and drugs. **Hepacol™** also helps improve the liver's ability in removing old red blood cells and recycles iron to the bone marrow to make new red blood cells.

Applications

Hepacol™ has been used to:

- Promote a healthier liver function.
- Help regain energy that the body needs for daily activities.
- Help rejuvenate liver cells and improve its function of processing all of nutrients the body requires, including protein, glucose, vitamins and fat.
- Assist infected liver in filtering toxic substances including alcohol, ammonia, nicotine, drugs, etc.
- Improve liver's ability in removing old red blood cells and recycle iron to the bone marrow to make new red blood cells.
- Protect the cells of the liver.
- Block the entrance of harmful toxins.
- Act as a powerful anti-oxidant.
- Enhance immune function.
- Aid in the prevention of liver cancer.
- Help lower cholesterol and reduce risk of gallstones.
- Increase bile secretion.
- Inhibit nausea and vomiting.
- Cleanse the liver and bloodstream.
- Counteract the hepatitis virus.
- Promote the synthesis of liver cell protein.

Ginger Root B.E.E.®: Ginger is a spicy aromatic, carminative, diaphoretic, stimulant; diuretic herb that removes pain, spasms, inflammation and excess fluid and cleanses waste from the stomach, intestines, liver, joints, and muscles while increasing circulation. It contains volatile oils and aromatic constituents that increase bile secretion and inhibit nausea and vomiting, thus improving appetite and digestion. It also helps lower cholesterol and reduces the formation of gallstones. Ginger brings heat into the system, which stimulates digestion. And it also impairs cholesterol absorption and stimulates the conversion of cholesterol to bile acids, which further cleanses the liver and gall bladder. In addition, ginger is a great detoxifier. It contains more than 12 antioxidant compounds. Ginger has also been shown to shrink liver tumors in animal testing. Ginger also inhibits platelet aggregation. The substance called 6-gingerol is the main active compound in ginger root and the one that gives ginger its distinctive flavor. Moreover, ginger helps build a powerful antioxidant-based resistance in the blood and liver. By protecting the body from free-radical damage, ginger strengthens the body's defenses against harmful carcinogens as well as subsequent tissue degeneration.

Pomegranate Fruit B.E.E.®: Pomegranates have substances, such as polyphenols, that have antioxidant, anti-viral, and anti-tumor activity. The fruit works as a powerful antioxidant that neutralizes damaging superoxide free radicals, cleanses the liver and bloodstream thereby, rejuvenating the liver's natural detoxification and cleansing functions and improving the health of the entire liver. Preliminary studies suggest that pomegranates may contain almost three times the total antioxidant ability compared

with the same quantity of green tea or red wine. It also provides a substantial amount of potassium, is high in fiber, and contains vitamin C and niacin. It also soothes the nerves and stimulates the liver. Specific extracts from pomegranates protect levels of the antioxidant enzymes catalase, peroxidase, and superoxide dismutase. The pomegranate extracts also help to protect the liver from the toxic effects of carbon tetrachloride. Pomegranates also provide minerals to the liver and assimilate vitamin A from food intake.

Vitamin and Mineral Complex (Thiamine, Ascorbic Acid, d-alpha Tocopherol, Selenium Yeast, Zinc Gluconate): in addition to enhancing antioxidant activities, they work together to counteract the hepatitis virus and reduce the toxic effects of alcohol, smoking, drugs and chemicals. They improve amino acid metabolism, detoxify harmful hepatotoxins and promote the synthesis of liver cell protein, which will benefit damaged liver cells by recovering their normal structure and function. They also regulate cholesterol levels and enhance immune function and protect against liver cancer.

Thiamine - Giving the B vitamin thiamine (Vitamin B1) to patients with chronic hepatitis B infection improves signs of the disease, a small preliminary study has found. While patients were on thiamine treatment, their aminotransferase levels fell from abnormally high to normal levels; these levels increased when thiamine was subsequently withdrawn. And in subsequent liver biopsies after thiamine treatment, HBV DNA was undetectable. This is the first study to investigate thiamine for treating hepatitis B infection. There are several potential ways that the vitamin might fight the infection. For example, thiamine binds to iron and thus reduces the iron load in the liver. Past studies have linked high iron levels in the liver to more severe HBV infection, as well as a worse response to interferon.

Ascorbic Acid - Vitamin C (Ascorbic Acid) is an antioxidant, which helps protect the body from free oxygen radicals, which are by-products of the normal activity of cells, stimulates the healing process and is essential for healthy immune function. It is involved in antibody production and white blood cell function and activity as well as the production of natural interferon, an antiviral substance. Although the exact mechanism of liver disease and fibrosis in Hepatitis C is not completely understood, it is known that free oxygen radicals caused by oxidative stress contribute to the disease progression. Antioxidants have been shown to scavenge free radicals and prevent tissue injury. For this reason, a diet that is rich in antioxidants, and/or antioxidant supplements may work as a supportive therapy to combat liver damage caused by oxidative stress. Vitamin C in the amount of 2 grams per day was reported in a preliminary trial to prevent hepatitis infection in individuals receiving blood transfusions. This report was followed up by a double-blind trial, in which vitamin C actually reduced the incidence of hepatitis by 29%. An older trial also suggested that injections of vitamin C may be helpful in treating viral hepatitis.

Vitamin E - Scientists have found that vitamin E improves the function of the liver and thereby strengthens the body's defense system. Vitamin E significantly stimulates the hepatic (liver) production of glutathione, which is the body's major line of defense

against free radicals and potentially harmful agents and metabolites. Vitamin E supplementation might be effective in the treatment of chronic hepatitis B. Studies have shown that people with Hepatitis C have a decrease in this antioxidant. It is also possible that vitamin E can be a useful adjunct to interferon therapy. Some other studies have confirmed a lowering in the liver enzymes in response to antioxidant supplementation.

Selenium - Selenium is a powerful antioxidant mineral that works synergistically to assist in protection against further damage to liver cells. Researchers in Taiwan report that low blood levels of Selenium, an important antioxidant that protects the immune system by preventing the formation of dangerous free radicals, may contribute to an increased risk of liver cancer in those with Hepatitis B and C. Selenium levels have been found to be low in people with liver cirrhosis and the need for antioxidants has been found to be increased. A small, preliminary trial suggested that 100 mcg per day of selenium may improve liver function in people with alcoholic cirrhosis. Selenium has also been found to be effective in reducing liver inflammation. Selenium is essential for healthy immune functioning. A large-scale study has shown that selenium supplementation reduces the incidence of viral hepatitis in selenium-deficient populations, presumably by enhancing immune function. In one study, selenium supplementation reduced the incidence of hepatitis-B-induced hepatoma among those with low selenium status.

Zinc - Zinc is another essential nutrient and acts as a co-factor for many enzyme systems. Zinc deficiency can cause a whole range of consequences. One important role that zinc plays is in the functioning of an enzyme alcohol dehydrogenase involved in the conversion of alcohols to aldehydes in Phase I detoxification. Therefore anyone who drinks alcohol should ensure they have optimum amounts of zinc in their diet. In this study, supplementation with zinc (in the form of a zinc complex of L-carnosine) enhanced the response to interferon-alpha therapy in patients with chronic hepatitis C. Zinc has antiviral and immune-enhancing properties, which may explain the observed beneficial effects. Zinc deficiency may occur due to poor dietary intake, reduced intestinal absorption, and increased urinary losses. Zinc is an important cofactor involved in the detoxification of ammonia via the urea cycle. Zinc deficiency may result in increased blood ammonia concentrations. Dietary zinc supplementation may inhibit collagen production in the liver and reduce hepatic fibrosis. Zinc may also protect hepatocytes from free radical injury. Most importantly, zinc inhibits the absorption of copper from the small intestine through induction of metallothionein. Alcoholic liver cirrhosis is associated with zinc deficiency. In a double-blind trial, zinc acetate supplementation (200 mg three times daily, providing a total of 215 mg of elemental zinc per day), given to cirrhosis patients for seven days, significantly improved portal-systemic encephalopathy (PSE). A second trial achieved similar results after three months of treatment. People with cirrhosis sometimes have impaired taste function, and it has been suggested that zinc deficiency may be the cause of this abnormality. Although one study demonstrated that taste problems in cirrhosis are due to the disease process itself and not to zinc deficiency, a double-blind trial showed that 200 mg three

times per day of zinc sulfate (providing 135 mg of elemental zinc per day) for six weeks significantly improved taste function in people with alcoholic liver cirrhosis.

SUGGESTED USE:

Take 3 **Hepacol™** capsules per day for the first 7 days, taking one dose right before bedtime. Take 2 **Hepacol™** capsules right before bedtime every day thereafter until condition subsides or liver enzymes become normal. For general maintenance and protection, take one capsule daily before right before bedtime.

The use of **Immunol™** may enhance the benefits of **Hepacol™**. Clinics using this combination have reported excellent results.