

Healthy Cholesterol & Blood Sugar START IN YOUR LIVER

Your liver influences your levels of cholesterol and triglycerides, insulin sensitivity, detoxification, nutrient utilization, and many other key aspects of health. You just cannot be optimally healthy with your liver health on a downward spiral.

“More than one-third of all people that have heart attacks have total serum cholesterol levels below 200 milligrams per deciliter [mg/dL],” notes Brian Sanderoff, a natural pharmacist who also teaches herbalism and alternative medicine at the University of Maryland School of Pharmacy. “The truth is that...oxidation of the LDL [low-density lipoprotein or harmful] cholesterol in the body...starts the very complicated cascade of events that leads to the formation of plaques that eventually causes a clogged artery. Usually, the offending substances, the molecules that are oxidizing the LDL cholesterol, are heavy metal toxins that we pick up from our environment, from the food we eat, the water we drink and the air that we breathe.” Sanderoff recommends both weight loss and natural agents for lowering cholesterol for reducing overall levels of

circulating LDL cholesterol. But he adds: “You must understand, and I can’t stress this enough, an inflated cholesterol level is not about diet; it’s about liver function. When the liver is not functioning properly or optimally, that is when the body has a tendency to show the symptom of high cholesterol.”

About one-third of the U.S. population who suffer from type 2 diabetes mellitus have non-alcoholic fatty liver disease (NAFLD), which can lead to cirrhosis.

VITAL ORGAN HEALTH

LiverX™ from MRM (Metabolic Response Modifiers, a company known for value and quality in your local health food store) contains powerful yet completely safe liver support nutrients and botanicals recommended by experts.

N-acetyl cysteine (NAC) is an altered form of the amino acid cysteine, which is commonly found in food and synthesized by the body. In animals, the antioxidant activity of NAC protects the liver from the adverse effects of exposure to several toxic chemicals. NAC also protects the body from pain medication toxicity and is used in hospitals for patients with acetaminophen poisoning. It has also been shown to be effective at treating liver failure from causes other than acetaminophen poisoning (e.g., hepatitis, and other drug toxicity).

Alpha-lipoic acid (lipoic acid) is a universal antioxidant. It works in both fatty and watery regions of cells to quench free radicals. It also helps to recycle other antioxidants, including vitamins E and C, CoQ10, and glutathione, extending their metabolic life. According to one expert, “Alpha-lipoic acid has been used successfully for the maintenance of liver health and as a treatment for several toxin-related illnesses. Alpha-lipoic acid has been used extensively in Europe for years as a non-toxic nutrient to treat various chemical overdoses such as mushroom poisoning, radiation poisoning and alcoholic hepatitis. It has also been used to treat diabetic neuropathy and elevated liver enzymes. Elevated liver enzymes, which can indicate liver damage, can be a serious problem for people with life threatening diseases. For people



who take prescription medications, these same drugs can cause increased liver enzymes. Alpha-lipoic acid may help protect the liver so that you can take certain drugs. Another benefit of alpha-lipoic acid may be its ability to elevate the levels of glutathione (GSH). Low levels of GSH may cause oxidative stress, and cause inflammation and damage organs." GSH is the key antioxidant for maintaining liver health.



Another key liver-health supplement is silymarin. Unfortunately, the body's absorption of this active phytochemical of milk thistle is usually very poor. The type of milk thistle used in

LiverX is combined with phosphatidylcholine and proven to be five times more absorbable than non-phytosome formulas. This is important for optimal results. Usual benefits include improvement in aminotransferases and liver function tests.

"Literally hundreds of research studies, mostly in Europe, have confirmed the remarkable ability of milk thistle to protect the liver against virtually all types of damage: from accidental exposure to chemical pollutants, toxic side effects of medications, liver diseases like hepatitis and even the self-inflicted damage from overindulgence of rich food and alcohol," says liver expert Ralph Napolitano.



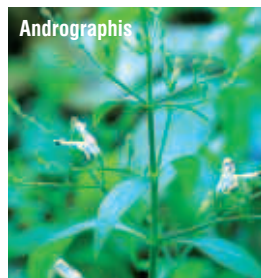
Picrorhiza kurroa is a well-known herb in the Ayurvedic system of medicine and has traditionally been used to treat disorders of the liver and upper respiratory tract, reduce fevers, and to treat

dyspepsia, chronic diarrhea, and scorpion sting.

The hepatoprotective action of *Picrorhiza kurroa* is not fully understood but may be attributed to its ability to inhibit the generation of oxygen anions and to scavenge free radicals. In rats infected with malaria, *Picrorhiza kurroa* restored depleted glutathione levels, thereby enhancing detoxification and antioxidation, and helping maintain a normal oxidation-reduction balance. Like milk thistle, *Picrorhiza kurroa* has been shown to stimulate liver regeneration in rats, possibly via stimulation of nucleic acid and protein synthesis. Although the mechanism is unclear, animal studies indicate the

herb's constituents exhibit a strong anticholestatic activity against a variety of liver-toxic substances, appearing to be even more potent than silymarin. *Picrorhiza* also exhibits a dose-dependent choleric activity, evidenced by an increase in bile salts and acids, and bile flow. Numerous animal studies, primarily in rats, have demonstrated that the active constituents of *Picrorhiza kurroa* are effective at preventing liver toxicity and the subsequent biochemical changes caused by numerous toxic agents.

Andrographis paniculata is a native shrub from the Indian subcontinent, where its common name is Kalmegh. In Ayurveda, andrographis is used primarily for sluggish liver and to protect the liver



against toxins. Laboratory and clinical trials have demonstrated its effectiveness in cases of toxic liver damage, poor liver function and hepatitis. Traditionally the herb is also used for high blood pressure and modern research has also confirmed its gentle and safe hypotensive effects.

CHOLINE—THE NEWEST VITAMIN

Although the National Academy of Sciences (NAS) recognized it as an essential nutrient only relatively recently, in 1998, choline is essential to liver function. Choline deficiency promotes lipid (fat) accumulation in the liver. Choline deficiency in humans can produce liver abnormalities in just a few weeks, and prolonged deficiency of choline can produce severe liver damage. Health experts believe many people's diets currently may not deliver enough choline. Fortifying foods and supplements are therefore important.

HEALTHY CHOLESTEROL AND BLOOD SUGAR

By addressing your liver health, you are definitely addressing your overall health. If you are overweight or have other signs of NAFLD, consider the use of a quality liver support formula with each of these ingredients. People with high cholesterol and diabetes will especially benefit by supplementing with liver support antioxidants such as found in LiverX. Take care of your liver, so it can take care of you. ■

How Do I Know if I Have NAFLD?

The diagnosis of NAFLD is usually suspected in individuals found with asymptomatic elevation of aminotransferases (liver enzymes), radiological findings of fatty liver or unexplained persistent changes in liver texture. Also, obesity, insulin resistance, elevated triglycerides and cholesterol are often signs of NAFLD-afflicted individuals.



Resources

Dosage—Take two LiverX capsules daily with meals.

Availability—LiverX from MRM is available nationwide at natural health centers and from health professionals. Contact MRM directly to find a store near you. The toll-free number is (800) 948-6296.