

# CHOLEST-RESPONSE™

## System Support for Healthy Cholesterol Levels



Today's lifestyle, with its high-fat, processed foods, lack of exercise, and high stress levels, leaves you at risk for imbalanced cholesterol levels. Source Naturals is committed to your health and longevity. That's why we developed CHOLEST-RESPONSE.

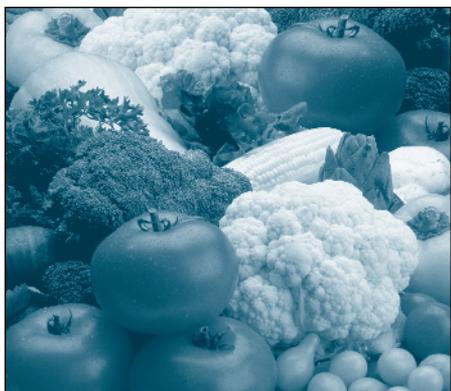
CHOLEST-RESPONSE is a Bio-Aligned Formula™, designed to help keep your cholesterol levels

in the normal range. Its ingredients support the multiple body systems that influence cholesterol levels. The nutrients, herbs and special ingredients in CHOLEST-RESPONSE address cholesterol regulation, breakdown and elimination, as well as HDL regulation, the heart and circulation, antioxidant defense, and the thyroid gland.

And now CHOLEST-RESPONSE has been updated to include even more of the latest groundbreaking ingredients for supporting cardiovascular health, including Sytrinol™, guggul, policosanol, and beta sitosterol. CHOLEST-RESPONSE supports two of the key metabolic SystemiCare™ systems identified by Source Naturals® as critical to optimal health: Circulation and Antioxidant Defense.



Strategies for Wellness<sup>SM</sup>



## Cholesterol and Your Health

Cholesterol is a compound required by your body to strengthen cell membranes and provide building blocks for hormones, bile and vitamin D. When your body needs more cholesterol, your liver takes carbohydrates, proteins and fats from your diet (triglycerides) and converts them into cholesterol. The amount of cholesterol you consume in food is minute compared to the amount produced by your liver.

When cholesterol moves through your blood to your cells, it can travel in groups such as lipoproteins, which also contain fats and proteins. Low Density Lipoproteins (LDL) carry cholesterol from the liver to your body tissues. LDL cholesterol can undergo oxidation by free radicals in the artery walls, where it becomes trapped, reducing the size and function of arteries, and compromising blood flow. High Density Lipoproteins (HDL) transport cholesterol away from peripheral tissues and back to the liver, where it can be eliminated. Antioxidant protection, balanced cholesterol production by your liver, and efficient elimination of cholesterol are all critically important to your cardiovascular health.

## Comprehensive Bio-Aligned Formula™

No other product contains the scope of targeted nutrition provided by this Bio-Aligned Formula. **CHOLEST-RESPONSE** addresses the following functions:

**Cholesterol Regulation:** Vitamin U activates the enzyme cholesterol 7 alpha-hydroxylase, which helps break down cholesterol. Curcumin (turmeric) significantly reduces serum lipid peroxides, raises HDL levels, and helps maintain cholesterol levels within the normal range. Policosanol acts at the level of cholesterol biosynthesis and increases LDL degradation, while beta-sitosterol and green tea inhibit intestinal uptake of cholesterol and increase fecal bile secretion. Green tea also reduces fat and cholesterol storage in the liver. Sytrinol™, a patented blend of citrus polymethoxylated flavones and tocotrienols, inhibits production of apo B, the structural protein in LDL, and inhibits an enzyme that aids in tryglyceride synthesis. Sytrinol inhibits cholesterol production in the liver through its effects on the HmG-CoA enzyme.

## Cholesterol Breakdown and Elimination:

Much of the cholesterol made by the liver is utilized to create bile, a substance used in digestion to emulsify fats. Because excess cholesterol is excreted from the body in the form of bile, it is important to support the liver's bile-producing mechanism. Artichoke and dandelion, used since ancient times for healthy digestion, support bile production and elimination. Myricetin, a naturally occurring flavonoid and close relative of quercetin, supports cholesterol uptake and removal from the bloodstream by white blood cells. Vitamin U has been shown in animal studies to support cholesterol breakdown. The guggulsterones in guggul promote the secretion of cholesterol in bile through their actions at the farnesoid X receptor (FXR).

**HDL Regulation:** **CHOLEST-RESPONSE** contains botanicals and nutrients that support a healthy balance between HDL and LDL. Tocotrienols increase HDL in the blood.

**Heart and Circulation:** Recent research has focused on the cardioprotective and tryglyceride-lowering actions of garlic, as

well as its effect on lipid levels. Policosanol and ginkgo, which has been used in China for thousands of years, support microcirculation and blood flow, while vitamin C supports vessel elasticity. Policosanol also reduces platelet aggregation. Arginine supports healthy artery dilation and reduced cell adhesion to blood vessel walls. Green tea may help reduce fat storage in the heart. Hawthorn is the premier cardiac tonic of Western herbalism. Gamma E is the form of vitamin E found in high levels in diets associated with cardiovascular health.

**Antioxidant Defense:** Antioxidant protection is critical because it is only when cholesterol is oxidized that it becomes harmful to blood vessels. **CHOLEST-RESPONSE** contains powerful antioxidants, which help prevent oxidation and maintain vascular health. These include myricetin, turmeric, green tea, guggul, policosanol, coenzyme Q10, tocotrienols, and vitamin E. Gamma E prevents oxidation of LDL.

**Thyroid Gland:** The thyroid regulates all aspects of metabolism, including heart rate, and is essential for healthy circulation and cholesterol levels. Iodine from kelp is essential for production of thyroid hormones. Guggul is a powerful health-promoting herb, used for centuries in Ayurvedic herbalism, which supports the thyroid and aids natural fat-burning mechanisms. Guggul and selenium increase conversion of thyroid hormone to its active T3 form. When the thyroid makes hormones, there are unwanted oxidant byproducts. Selenium helps protect thyroid tissues from oxidative damage.

## Maintain Normal Cholesterol Levels: Healthy Lifestyle Tips

**Eat a Healthy Diet:** A diet low in cholesterol, saturated fats and trans-fatty acids, and high in complex carbohydrates and fiber is important. Good choices include fruits and vegetables, whole grains, lean meats, fish and poultry, low fat or fat-free dairy products, and healthy fats such as

olive oil in limited amounts. Avoid sugar, which has been reported to reduce protective HDL cholesterol and increase cardiovascular risk.

**Exercise Regularly:** Exercise may increase HDL and lower triglycerides. Aerobic exercises such as brisk walking, jogging, swimming, and biking, are best for lowering LDL and raising HDL. Weight training offers a complementary benefit by reducing LDL levels.

**Quit Smoking:** Cigarette smoking lowers HDL levels and is directly responsible for 20% of deaths from heart disease. Smoking doubles the risk of heart attack at any blood cholesterol level.



**Drink Alcohol in Moderation:** Many studies report that modest alcohol consumption increases HDL and protects against heart disease. Substances in red wine such as flavonoids, phytoestrogens and polyphenols like resveratrol may contribute to alcohol's protective properties. But, since alcohol consumption can cause other health problems, you should consult your health care professional about alcohol use.

# A Wellness Revolution in Cardiovascular Care

At a time when our cardiovascular health faces numerous challenges, research into the remarkable heart-supportive properties of the natural world is critical. Source Naturals is your connection to this research, dedicated to quickly bringing you nutritional benefits now available only through the natural products marketplace.

## References

Guthrie, N. and E.M. Kurowska. Anticancer and cholesterol lowering activities of citrus flavonoids in *Handbook of Nutraceuticals and Functional Foods*.

Wildman, R.E.C. Ed., CRC Press: Boca Raton, 2000, pp. 113-126.

Nakamura, N. et al. 1981. Hypolipidemic effect of L-form S-methylmethionine sulfonium chloride in man. *Arzneimittelforschung*. 31(4): 725-9.

Sano, J. et al. 2004. Effects of green tea intake on the development of coronary artery disease. *Circ J*. 68: 665-670.

Singh, R. B. et al. Hypolipidemic and antioxidant effects of *Commiphora mukul* as an adjunct to dietary therapy in patients with hypercholesterolemia. Aug 1994. *Cardiovasc Drugs Ther*. 8(4): 659-64.

# Cholest-Response™ is a Bio-Aligned Formula™

## Supports Cholesterol Levels Already in the Normal Range

<b>Cholesterol Regulation</b>	Beta Sitosterol, Garlic, Green Tea, Guggul, Policosanol, Soybeans, Sytrinol™, Turmeric, Vitamin U, Chromium, Inositol Nicotinate
<b>Cholesterol Breakdown &amp; Elimination</b>	Artichoke, Dandelion, Guggul, Myricetin, Vitamin U
<b>HDL Regulation</b>	Garlic, Guggul, Myricetin, Turmeric, Chromium, Vitamin C, Tocotrienols
<b>Heart and Circulation</b>	Coenzyme Q10, Garlic, Ginkgo, Green Tea, Hawthorn, Policosanol, Arginine, Vitamins C & E, Niacin
<b>Antioxidant Defense</b>	Coenzyme Q10, Ginkgo, Green Tea, Guggul, Hawthorn, Myricetin, Policosanol, Tocotrienols, Turmeric, Vitamin C, Gamma E
<b>Thyroid Gland</b>	Guggul, Kelp, Selenium

To learn more about Source Naturals Bio-Aligned Formulas™, visit our website, [www.sourcenaturals.com](http://www.sourcenaturals.com), or look for the Bio-Aligned Chart Book at participating health food stores.



Strategies for Wellness<sup>sm</sup>

[www.sourcenaturals.com](http://www.sourcenaturals.com)



Bio-Aligned Formulas™  
Body Systems Charts 303



The above information has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

© 2009 Source Naturals, Inc., P.O. Box 2118, Santa Cruz, CA 95062

REV0903 LC3126